www.AUTOMOTIVEMECHANIC.org

WIRING DIAGRAMS
FCS-12887-01

FORD CUSTOMER SERVICE DIVISION

Quality is Job 1

Ford Customer Service Division has developed a new format for the 2001 Electric Ranger Wiring Diagrams. Our goal is to provide accurate and timely electrical information.

2001 Wiring Diagrams Features

- Schematic pages do not contain **Component Location** references to full-view illustrations and **Component Descriptions** that describe the system function of a component. (This information is available in CELL 152 Location Index or the Workshop Manual.)
- "**COMPONENT TESTING"** procedures (CELL 149) that tell the user how to perform diagnostic tests on various circuits.
- **NOTES, CAUTIONS and WARNINGS** contain important safety information.
- Full view "**COMPONENT LOCATION VIEWS**" (CELL 151) to help locate on-vehicle components.
- Circuit voltages have been added to schematic pages to help simplify troubleshooting. Nonessential troubleshooting hints have been deleted.
- **Cellular Pagination:** A specific section (or cell) in all Wiring Diagrams is numbered by cell and starts with page 1. For example: "**HOW TO USE THIS MANUAL"** is CELL 2 and begins with page 2-1.
- "**CONNECTOR FACES**" (CELL 150) will contain all connectors, to aid in servicing electrical wiring.
- "C" numbers have been assigned for all electrical connectors. "C" numbers are listed in the "**LOCATION INDEX"** (CELL 152).
- "**HARNESS CAUSAL PART NUMBERS**" (CELL 153) has been added to aid in identifying warranty concerns.
- **In-line connector numbers** contain a suffix to denote connector "gender" type (F-socket, M-prior blade).
- **HIGH VOLTAGE WIRES** are identified by "white" wires with a black outline. Black stripes may also appear on these wires, indicating a tracer. Wiring harnesses with high voltage wiring will be identified in the vehicle by orange convolute around that harness auxiliary loads such as the A/C system, power steering pump, heater and certain control components. These components should be treated with extreme caution. Do not perform any service on them until all high voltage power has been disconnected.

NOTE: The descriptions and specifications contained in this manual were in effect at the time this manual was approved for printing. Ford Motor Company reserves the right to discontinue models at any time, or change specifications or design without notice and without incurring any obligation.

ORDERING INFORMATION

Information about how to order additional copies of this publication or other Ford publications may be obtained by writing to Helm, Incorporated at the address shown below or by calling 1-800-782-4356. Other publications available include:

- Workshop Manuals
- Service Specification Books
- Car/Truck Wiring Diagrams
- Powertrain Control/Emissions Diagnosis Manuals

Helm Incorporated
P.O. Box 07150
Detroit, Michigan 48207

All rights reserved. Reproduction by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system or translation in whole or part is not permitted without written authorization from Ford Motor Company.

Copyright © 2000, Ford Motor Company

www.AUTOMOTIVE MECHANIC.ORG

1-1 TABLE OF CONTENTS/INDEX

Table of Contents

Grounds 10-1
Fuse Panel/Circuit Protection 11-1
Auxiliary Battery Charging System ... 12-1
Power Distribution (Low Voltage) 13-1
Power Distribution (High Voltage) ... 13-32
Multiplex Communication Network ... 14-2
Traction Battery System 16-1
Traction Battery Charging/Heating System 18-1
Traction Battery Cooling/Ventilation .. 19-1
Emergency Power Off (EPO)/Interlock System 20-1
Contactor Box Relay Control 21-1
Motor/Transaxle Control 26-1
Cooling System 33-1
Shift Lock 37-1
Anti-Lock Brake System (ABS) 42-1
Electronic Power Steering 43-1
Horn/Cigar Lighter 44-1
Air Bag Restraint System 46-1
Heater 53-1
Air Conditioner/Heater 54-1
Generic Electronic Module (GEM) 59-1
Instrument Cluster 61-1
Instrument Illumination 71-1
Interval Wiper/Washer 81-1
Headlamps 85-1
Courtesy Lamps 89-1
Turn/Stop/Hazard Lamps 90-1
Exterior Lamps 92-1
Backup Lamps 93-1
Daytime Running Lamps 97-1
Power Windows 100-1
Power Mirrors 124-1
Radio 130-1
Vacuum System 139-1
Component Testing 149-1
Connector Faces 150-1
Component Location Views 151-13
Location Index 152-1
Harness Causal Part Number 153-4

Index

Air Bag Restraint System 46-1
Air Conditioner/Heater 54-1
Anti-Lock Brakes 42-1
Auxiliary Battery Charging System 12-1
Backup Lamps 93-1
Circuit Protection 11-1
Component Location Views 151-13
Component Testing:
- Exterior Rear View Mirror Switch ... 149-10
- Ignition Switch 149-4
- Introduction 149-1
- Left/Right Door Lock Switch 149-7
- Main Light Switch 149-2, 149-3
- Master Window Control Switch 149-8
- Micro ISO Relay 149-12
- Mini ISO Relay 149-11
- Multifunction Switch (Except Postal) 149-5, 149-6
- Right Window Switch 149-9

Contactor Box 16-10
Contactor Box Relay Control 21-1
Cooling System 33-1
Electric Vehicle Power Distribution Box (EVPDB):
Fuses:
- Battery Charger 13-4, 13-19
- Battery Control Module (BCM) . 13-4, 13-19
- Blower Motor Relay 13-6, 13-21
- Contactor Box 13-3, 13-18
- Coolant Pump Relay 13-6, 13-21
- Cooling Fan Relay Box 13-2, 13-17
- Evac/Fill Connector #1, #2 .... 13-2, 13-17
- Horn Relay 13-3, 13-18
- Ignition 13-1, 13-16
- Inertia Switch 13-3, 13-18
- Interface Adapter Assembly (IAA) Module 13-3, 13-18
- I/P Fuse Panel 13-2, 14, 17, 13-19
- Main Light Switch 13-5, 13-20
- Multifunction Switch 13-5
- Oil Pump Relay 13-6, 13-21
- Preheat Inverter Relay 13-18
- Power Point 13-3
- Power Windows 100-1
- Traction Battery Cooling Fan Relay 13-5, 13-20
- Vacuum Pump Relay 13-4, 13-19

Electronic Power Steering 43-1
Emergency Power Off (EPO)/Interlock System 20-1
Generic Electronic Module (GEM) . 59-1, 59-3
Grounds:
- G101 10-2
- G103 ..... 10-4, 10-11
- G105 ..... 10-7, 10-12
- G200 ..... 10-8, 10-16
- G203 10-10
- G1997 ..... 10-8, 10-18
- G1998 ..... 10-8, 10-17, 10-18
- G1999 ..... 10-8, 10-18
- G4999 ..... 10-9, 10-18

Gauges:
- Distance to Empty 61-2, 61-7
- Economy 61-2, 61-7
- Motor Enabled 61-2, 61-7
- Speedometer 61-2, 61-7
- Temperature 61-2, 61-7

www.AUTOMOTIVEMECHANIC.org

Traction Battery State of Charge 61-2, 61-7
Headlamps 85-1, 61-2
Heater 53-1
High Voltage Power Distribution Box (HVPDB):
A/C Inverter Motor Controller 13-32
DC/DC Converter 13-32
Positive Temperature Coefficient (PTC) Switching Module 13-32
Power Steering Controller Assembly 13-32
Horn/Cigar Lighter 44-1
Ignition Switch 13-1, 13-16
Indicators:
ABS 61-4, 61-9
Air Bag 61-4
Auxiliary Battery 61-1, 61-6
Brake Warning 61-3, 61-8
Charge 61-1, 61-6
Door Ajar 61-3
Economy Mode 61-1, 61-6
Electrical Hazard 61-3, 61-8
Hi Beam 61-4, 61-9
Left Turn 61-4, 61-9
Low Oil Pressure 61-1, 61-6
Low State of Charge 61-3, 61-8
Malfunction Indicator Lamp 61-1, 61-6
Power Light 61-1, 61-6
Power Reset 61-1, 61-6
Right Turn 61-4, 61-9
Seat Belt 61-3, 61-8
Instrument Cluster 61-1, 61-6
Instrument Illumination 71-1, 71-3
Interval Wiper/Washer 81-1, 81-3
I/P Fuse Panel:
Fuse1 . . . . . 13-12, 13-28
Fuse 2 13-8
Fuse 4 . . . . . 13-15, 13-31
Fuse 5 . . . . . 13-11, 13-27
Fuse 7 . . . . . 13-14, 13-30
Fuse 8 . . . . . 13-15, 13-31
Fuse 9 . . . . . 13-12, 13-28
Fuse 10 . . . . . 13-8, 13-23
Fuse 11 . . . . . 13-10, 13-25
Fuse 12 13-8
Fuse 13 . . . . . 13-11, 13-27
Fuse 14 . . . . . 13-8, 13-23
Fuse 15 . . . . . 13-10, 13-25
Fuse 16 . . . . . 13-7, 13-22
Fuse 17 . . . . . 13-9, 13-24
Fuse 19 . . . . . 13-10, 13-25
Fuse 20 . . . . . 13-8, 13-23
Fuse 21 . . . . . 13-9, 13-24
Fuse 22 . . . . . 13-9, 13-24
Fuse 23 . . . . . 13-12, 13-28
Fuse 24 . . . . . 13-8, 13-23
Fuse 25 . . . . . 13-9, 13-24
Fuse 26 . . . . . 13-9, 13-24
Fuse 27 . . . . . 13-12, 13-28
Fuse 28 13-8
Fuse 29 . . . . . 13-9, 13-24
Fuse 31 13-2
Fuse 32 13-2
Fuse 33 . . . . . 13-15, 13-31
Lamps:
Backup 93-1, 93-2
Hazard 90-2, 90-8
Headlamps 85-1, 85-2
License 90-10, 92-1
Outside Cargo/High Mount Stop 90-10
Park (Front) 92-2, 92-4
Park (Rear) 90-10, 92-1
Stop 90-4, 90-9
Turn 90-3, 90-5
Motor/Transaxle 26-1
Radio 130-1
Traction Battery Charger 18-1
Traction Battery Cooling Fan 19-1
Traction Battery Heaters 18-2
Traction Battery System 16-1
Vacuum System 139-1

WARNING: This vehicle contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

www.AUTOMOTIVEMECHANIC.org

1-3 TABLE OF CONTENTS/INDEX

IMPORTANT SAFETY NOTICE

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles, as well as the personal safety of the individual doing the work. This Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This Manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this Manual must first establish that the choice of methods, tools, or parts does not compromise personal safety or the vehicle integrity.

www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVEMECHANIC.ORG

2-1 HOW TO USE THIS MANUAL

The purpose of this manual is to show electrical circuits in a clear and simple fashion to make troubleshooting easier. **NOTES, CAUTIONS** and **WARNINGS** contain important information.

- **NOTES** describe how switches and other components operate to help complete a particular procedure.
- **CAUTIONS** provide information that could prevent making an error that may damage the vehicle.
- **WARNINGS** provide information to prevent personal injury.

The **WARNINGS** list on page 2-2 contains general warnings to follow when servicing a vehicle.

Components that work together are shown together. All electrical components used in a specific system are shown on one diagram. The circuit breaker or fuse is shown at the top of the page. All wires, connectors, components and splices are shown in the flow of current to ground at the bottom of the page. If a component is used in several different systems, it is shown in several places. For example, the Headlamp Switch is electrically a part of many systems and is repeated on many pages.

In some cases, a component may seem (by its name) to belong to a system where it has no electrical connection. For example, Radio Illumination is electrically part of Instrument Illumination, but because it has no electrical connection to the Radio system, it is not shown on the Radio diagram.

Schematic pages contain references to full-view illustrations and description notes for various components. The references are reverse-text blocks located next to each component and connector and refer the user to the appropriate illustration page and zone. The description notes describe the operation of the component.

Schematic pages contain circuit voltages to help simplify troubleshooting hints. 12V is used to imply battery voltage on a component connector terminal, and 0V is used to show that there should be continuity to ground on that particular terminal. Conditional voltages such as “12V with the ignition switch in RUN” will also be provided. Troubleshooting hints that can’t be simplified with circuit voltages will be shown at the end of each cell.

Component connector face information specific to a certain cell is found at the end of that cell. A Connector Face Reference List is provided to locate connector faces that are shown in different cells. Component connectors with five or more terminals are illustrated and are accompanied by a pinout chart that lists the function of all circuitry associated with that component.

“GROUNDS” (Cell 10) contains ground circuitry shown in complete detail. This information is useful for checking interconnections of the ground circuits of different systems.

“POWER DISTRIBUTION” (Cell 13) contains power distribution circuitry shown in complete detail. This section displays how the various fuses are powered and, in turn, how each system is powered.

“COMPONENT TESTING” (Cell 149) contains testing procedures for various switches. This information includes schematics, component terminal locations and step-by-step procedures.

“IN-LINE CONNECTOR FACES” (Cell 150) contains illustrations of all the in-line connectors that have 6 or more terminals. The terminals have pin numbers assigned to them.

“COMPONENT LOCATION VIEWS” (Cell 151) contains full-view illustrations which show the location of components and connectors in the vehicle.

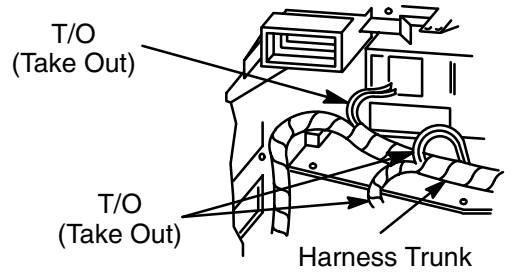
The **“LOCATION INDEX”** (Cell 152) provides the base part numbers, locations, connector face references and illustration references for all components, connectors, splices and grounds.

HELPFUL REMINDERS

Before using the Wiring Diagrams for troubleshooting, refer to these HELPFUL REMINDERS:

1. The abbreviation T/O, for take out, used in the Location Index (Cell 152), refers to the point at which a group of wires branch off the harness trunk. Refer to the wiring harness illustration.

Wiring harness at back of Instrument Panel, showing typical T/O (Take Out) locations



2. If a connector serves the same purpose in two separate versions (e.g., Automatic/Manual), but is physically different, *two* connector numbers are used. However, if a connector serves the same purpose in two separate versions (e.g., Automatic/Manual) and is physically the same, but the wire colors are different, only *one* connector number is used. If the same physical connector is used more than once, then more than *one* connector number is used.

www.AUTOMOTIVEMECHANIC.ORG

3. Wiring schematics provide a picture of how and under what conditions the circuit is powered, of the current path to circuit components, and of how a circuit is grounded. Each circuit component is named (underlined titles). Wire and connector colors are listed as follows (standard Ford color abbreviations are used):

COLOR ABBREVIATIONS

BU	**Blue**	**NA**	**Natural**
BK	**Black**	**OG**	**Orange**
BN	**Brown**	**PK**	**Pink**
DB	**Dark Blue**	**RD**	**Red**
DG	**Dark Green**	**SR**	**Silver**
GN	**Green**	**TN**	**Tan**
GY	**Gray**	**VT**	**Violet**
LB	**Light Blue**	**WH**	**White**
LG	**Light Green**	**YE**	**Yellow**

Note: Whenever a wire is labeled with two colors, the first color listed is the basic color of the wire, and the second color listed is the stripe marking of the wire.

4. When reporting Vehicle Repair Location Codes to Ford Customer Service Division, refer to Cell 160 (beginning on page 160-1). Note: Do *not* use the illustrations in Cell 151 (beginning on page 151-1) for reporting Vehicle Repair Location Codes.

5. **WARNINGS**

- *Always wear safety glasses for eye protection.*
- *Use safety stands whenever a procedure requires being under a vehicle.*
- *Be sure that the* **Ignition Switch** *is always in the OFF position, unless otherwise required by the procedure.*
- *Set the parking brake when working on any vehicle. An automatic transmission should be in PARK. A manual transmission should be in NEUTRAL.*
- *Operate the engine only in a well-ventilated area to avoid danger of carbon monoxide.*
- *Keep away from moving parts, especially the fan and belts, when the engine is running.*
- *To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.*
- *Do not allow flame or sparks near the battery. Gases are always present in and around the battery cell. An explosion could occur.*
- *Do not smoke when working on a vehicle.*
- *To avoid injury, always remove rings, watches, loose hanging jewelry and avoid wearing loose clothing.*

HOW TO FIND ELECTRICAL CONCERNS

TROUBLESHOOTING STEPS

These six steps present an orderly method of troubleshooting.

Step 1. Verify the concern.

- Operate the complete system to check the accuracy and completeness of the customer's complaint.

Step 2. Narrow the concern.

- Using the Wiring Diagrams, narrow down the possible causes and locations of the concern to pinpoint the exact cause.
- Read the description notes at the components and study the wiring schematic. You should then know enough about the circuit operation to determine where to check for the trouble. Further information can be found by referring to the Workshop Manual pages listed in the box at the top of the page.

Step 3. Test the suspected cause.

- Use electrical test procedures to find the specific cause of the symptoms.
- The component location reference bars and the pictures will help you find components. The Location Index (at the end of the manual) gives component location information for connectors, diodes, resistors, splices and grounds.

Step 4. Verify the cause.

- Confirm that you have found the correct cause by connecting jumper wires and/or temporarily installing a known good component and operating the circuit.

Step 5. Make the repair.

- Repair or replace the inoperative component.

Step 6. Verify the repair.

- Operate the system as in Step 1 and check that your repair has removed all symptoms without creating any new symptoms.

www.AUTOMOTIVEMECHANIC.org

2-3 HOW TO USE THIS MANUAL

Some engine circuits may need special test equipment and special procedures. See the *Workshop Manual* and other service books for details. You will find the circuits in this manual to be helpful with those special test procedures.

TROUBLESHOOTING TOOLS

JUMPER WIRE

This is a test lead used to connect two points of a circuit. A Jumper Wire can bypass an open to complete a circuit.

WARNING

Never use a jumper wire across loads (motors, etc.) connected between hot and ground. This direct battery short may cause injury or fire.

VOLTMETER

A DC Voltmeter measures circuit voltage. Connect negative (- or black) lead to ground, and positive (+ or red) lead to voltage measuring point.

OHMMETER

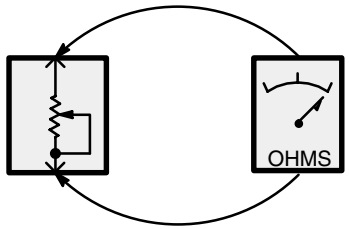


Figure 1 – Resistance Check

An Ohmmeter shows the resistance between two connected points (Figure 1).

TEST LAMP

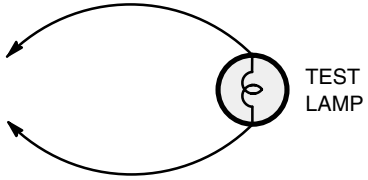


Figure 2 – Test Lamp

A Test Light is a 12-volt bulb with two test leads (Figure 2).

Uses: Voltage Check, Short Check.

SELF-POWERED TEST LAMP

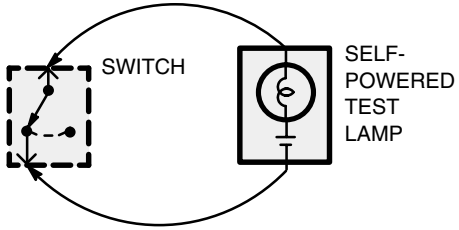


Figure 3 – Continuity Check

The Self-Powered Test Lamp is a bulb, battery and set of test leads wired in series (Figure 3). When connected to two points of a continuous circuit, the bulb glows.

Uses: Continuity Check, Ground Check.

CAUTION

When using a self-powered test lamp or ohmmeter, be sure power is off in circuit during testing. Hot circuits can cause equipment damage and false readings.

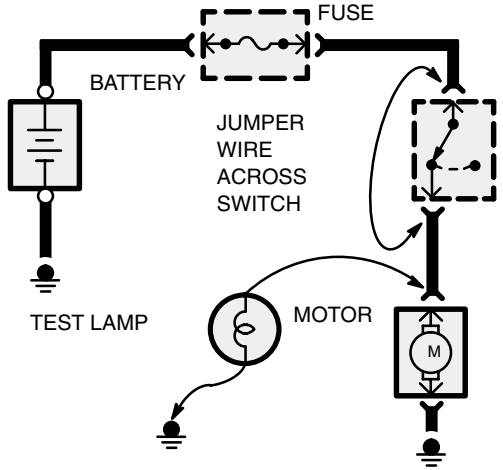


Figure 4 – Switch Circuit Check and Voltage Check

In an inoperative circuit with a switch in series with the load, jumper the terminals of the switch to power the load. If jumpering the terminals powers the circuit, the switch is inoperative (Figure 4).

CONTINUITY CHECK (Locating open circuits)

Connect one lead of Self-Powered Test Lamp or Ohmmeter to each end of circuit (Figure 3). Lamp will glow if circuit is closed. Switches and fuses can be checked in the same way.

www.AUTOMOTIVEMECHANIC.org

VOLTAGE CHECK

Connect one lead of test lamp to a known good ground or the negative (-) battery terminal. Test for voltage by touching the other lead to the test point. Bulb goes on when the test point has voltage (Figure 4).

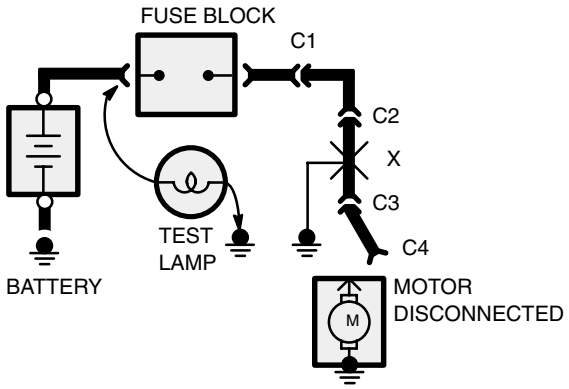


Figure 5 – Short Check

A fuse that repeatedly blows is usually caused by a short to ground. It's important to be able to locate such a short quickly (Figure 5).

1. Turn off everything powered through the fuse.
2. Disconnect other loads powered through the fuse:
   - Motors: disconnect motor connector (Connector C4 in Figure 5).
   - Lights: remove bulbs.
3. Turn Ignition Switch to RUN (if necessary) to power fuse.
4. Connect one Test Lamp lead to hot end of blown fuse. Connect other lead to ground. Bulb should glow, showing power to fuse. *(This step is just a check to be sure you have power to the circuit.)*
5. Disconnect the test lamp lead that is connected to ground, and reconnect it to the load side of the fuse at the connector of the disconnected component. (In Figure 5, connect the test lamp lead to connector C4.)
   - If the Test Lamp is off, the short is in the disconnected component.
   - If the Test Lamp goes on, the short is in the wiring. You must find the short by disconnecting the circuit connectors, one at a time, until the Test Lamp goes out. For example, in Figure 5 with a ground at X, the bulb goes out when C1 or C2 is disconnected, but not after disconnecting C3. This means the short is between C2 and C3.

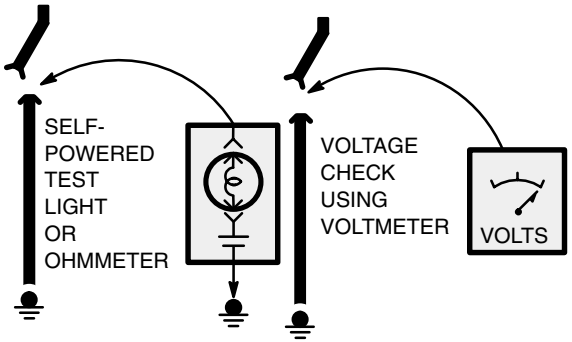


Figure 6 – Ground Check

Turn on power to the circuit. Perform a Voltage Check between the suspected inoperative ground and the frame. Any indicated voltage means that the ground is inoperative (Figure 6).

Turn off power to the circuit. Connect one lead of a Self-Powered Test Lamp or Ohmmeter to the wire in question and the other lead to a known ground. If the bulb glows, the circuit ground is OK (Figure 6).

The circuit schematics in this manual make it easy to identify common points in circuits. This knowledge can help narrow the concern to a specific area. For example, if several circuits fail at the same time, check for a common power or ground connection (see *Power Distribution* or *Grounds*). If part of a circuit fails, check the connections between the part that works and the part that doesn't work.

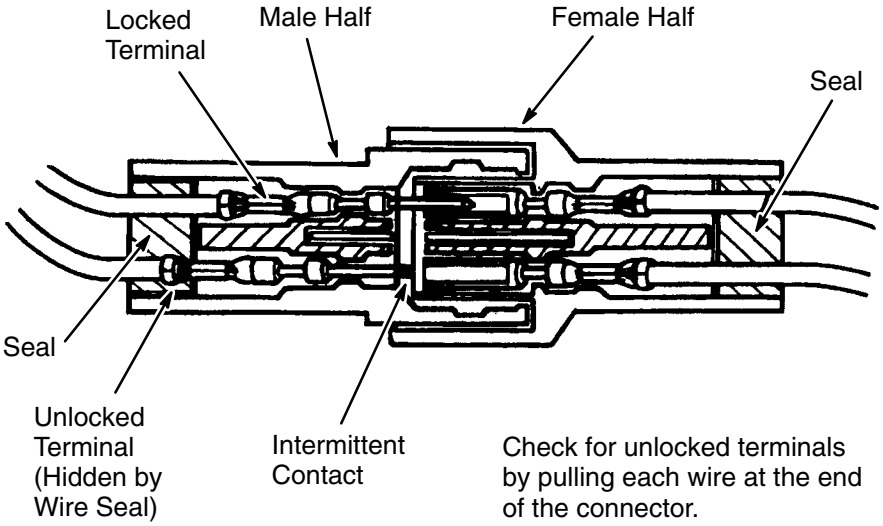
For example, if the lo beam headlamps work, but the high beams and the indicator lamp don't work, then power and ground paths must be good. Since the dimmer switch is the component that switches this power to the high beam lights and indicator, it is most likely the cause of failure.

www.AUTOMOTIVEMECHANIC.org

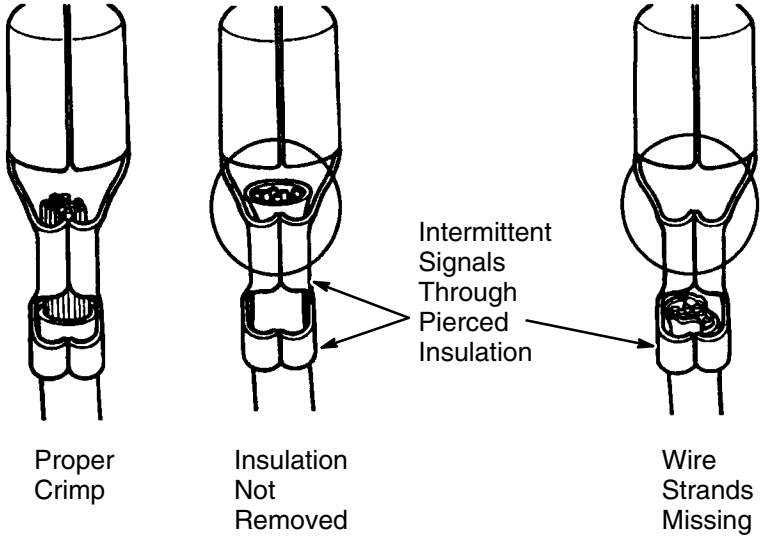
TROUBLESHOOTING WIRING HARNESS AND CONNECTOR HIDDEN CONCERNS

The following illustrations are known examples of wiring harness, splices and connectors that will create intermittent electrical concerns. The concerns are hidden and can only be discovered by a physical evaluation as shown in each illustration.

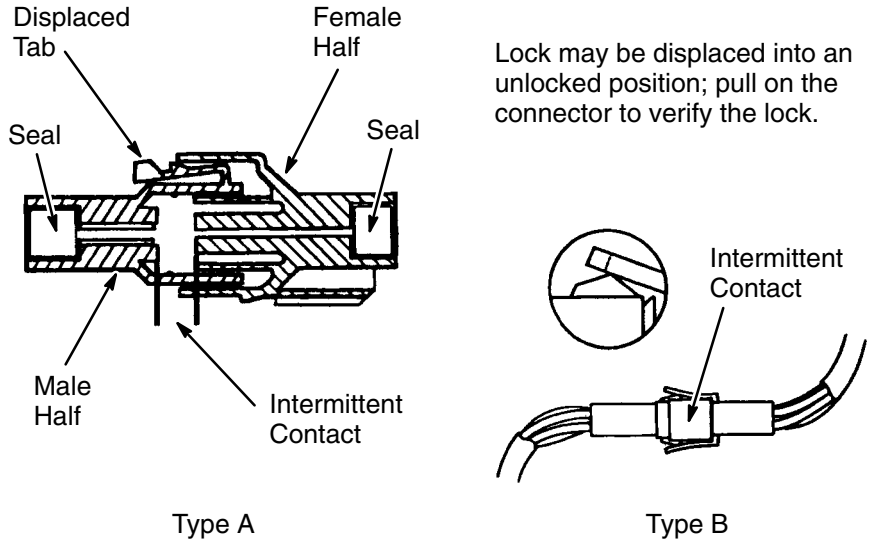
NOTE: Several components, such as the PCM, utilize gold plated terminals in their connections to the wiring harness. If those terminals need to be replaced, they must be replaced with a gold plated terminal.



TERMINAL NOT PROPERLY SEATED

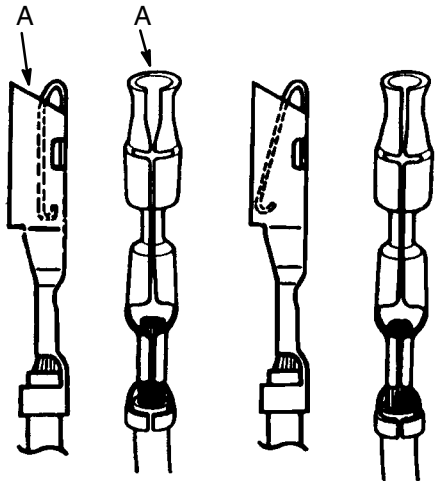


DEFECTIVE INSULATION STRIPPING



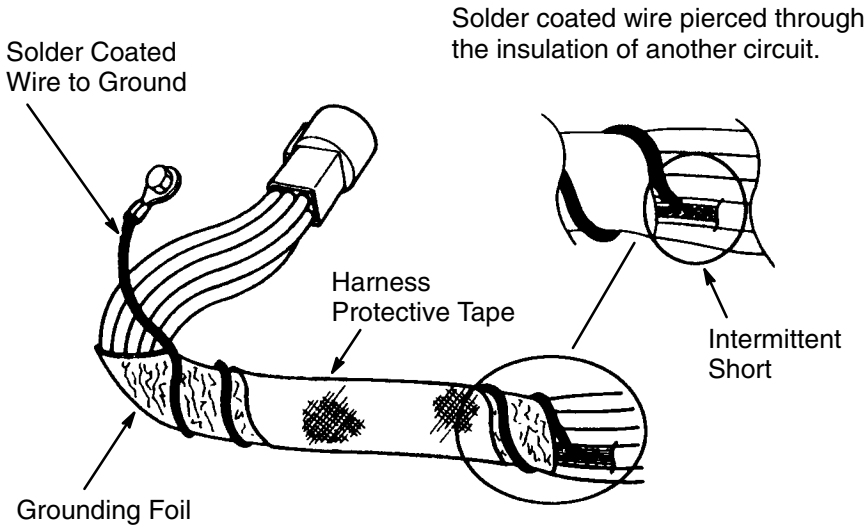
PARTIALLY MATED CONNECTORS

www.AUTOMOTIVEMECHANIC.org

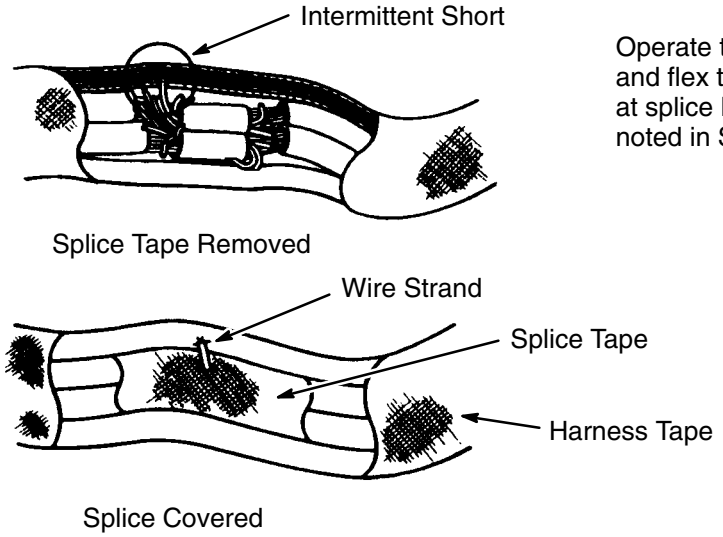


Any probe entering the terminal may enlarge the contact spring opening creating an intermittent signal. Insert the correct mating terminal (Location A) from the service kit and feel for a loose fit.

DEFORMED (ENLARGED) FEMALE TERMINALS

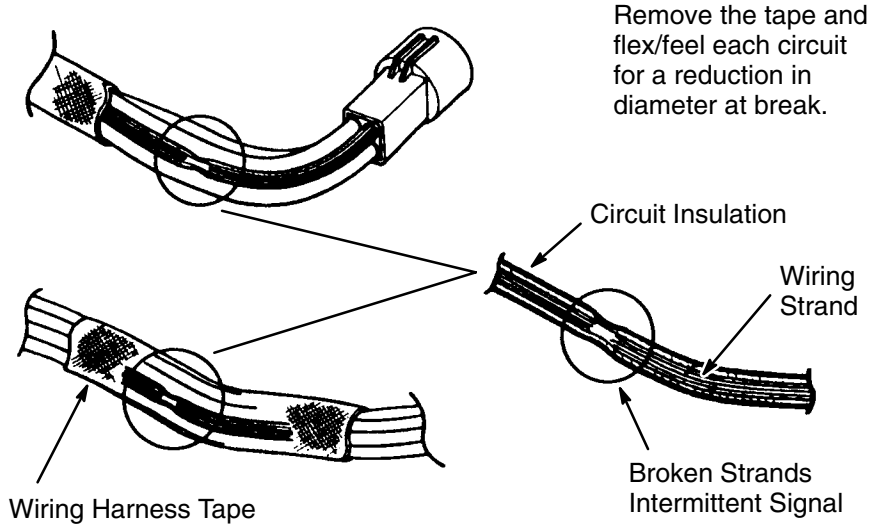

Solder coated wire pierced through the insulation of another circuit.
Solder Coated Wire to Ground
Harness Protective Tape
Intermittent Short
Grounding Foil

ELECTRICAL SHORT INSIDE THE HARNESS



Operate the system and flex the harness at splice location noted in Section 152.

ELECTRICAL SHORT WITHIN THE HARNESS



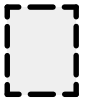
Remove the tape and flex/feel each circuit for a reduction in diameter at break.

BROKEN WIRE STRANDS IN HARNESS

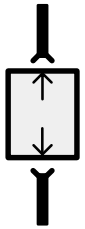
www.AUTOMOTIVEMECHANIC.ORG

2-7 HOW TO USE THIS MANUAL

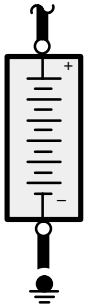
ELECTRICAL SYMBOLS



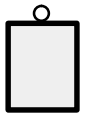
DASHED COMPONENT BOX
ONLY PART OF THE COMPONENT IS SHOWN ON THE PAGE; THE COMPONENT IS SHOWN COMPLETE IN ANOTHER LOCATION



COMPONENT WITH CONNECTORS



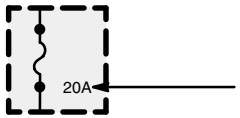
BATTERY



SCREW TERMINAL ON COMPONENT

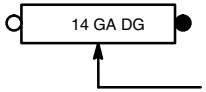
SEALED ELECTRONIC COMPONENT
ANY CIRCUITRY SHOWN INSIDE THE BOX IS A FUNCTIONAL EQUIVALENT ONLY AND IS NOT EXACT

GROUND CONNECTION



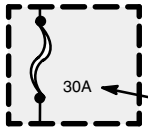
FUSE

CURRENT RATING



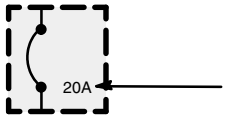
FUSIBLE LINK

WIRE SIZE AND COLOR



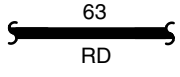
MAXI-FUSE
or
FUSIBLE LINK CARTRIDGE

CURRENT RATING

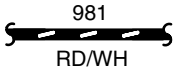


CIRCUIT BREAKER

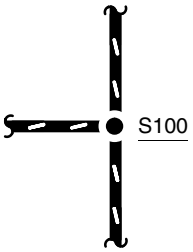
CURRENT RATING



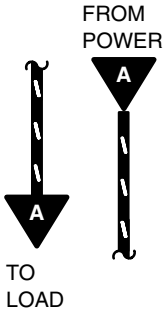
SOLID WIRES



STRIPED WIRES



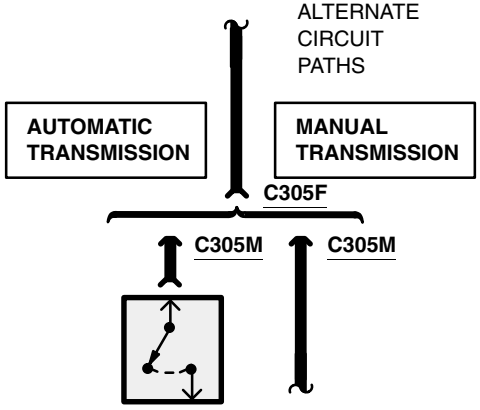
SPLICE OR CRIMP TERMINAL



"CUT" WIRES REFERENCED BETWEEN PAGES
ARROWS SHOW CURRENT FLOW FROM POWER TO GROUND

REVERSING LAMPS

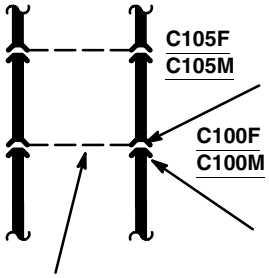
"REFERENCE" WIRES
COMPLETE WIRING SHOWN ON ANOTHER PAGE



ALTERNATE CIRCUIT PATHS

www.AUTOMOTIVEMECHANIC.org

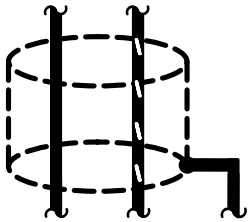
ELECTRICAL SYMBOLS



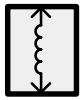
SINGLE DASHED LINE INDICATES THAT WIRE ON LEFT ALSO PASSES THROUGH THE SAME CONNECTOR

SEE GROUNDS *PAGES 10-1, 10-2*

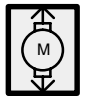
DASHED WIRE
CIRCUITRY IS NOT SHOWN IN COMPLETE DETAIL, BUT IS COMPLETE ON ANOTHER PAGE



SHIELD
WIRES ARE COVERED BY A SHIELD



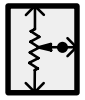
FIELD COIL



MOTOR

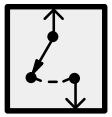
HEATING ELEMENT

THERMISTOR

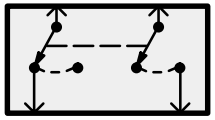


RHEOSTAT OR POTENTIOMETER

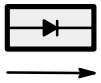
SOLENOID



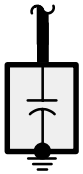
SWITCH



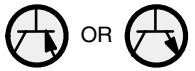
GANGED SWITCHES
CONTACTS MOVE AT THE SAME TIME



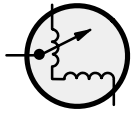
DIODES
CURRENT FLOWS IN DIRECTION OF ARROW ONLY



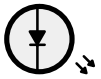
CAPACITOR



TRANSISTOR

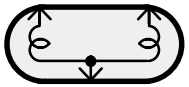


GAUGE

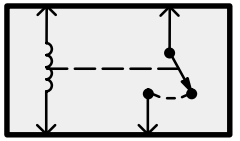


LIGHT EMITTING DIODE (LED)

LIGHT BULB



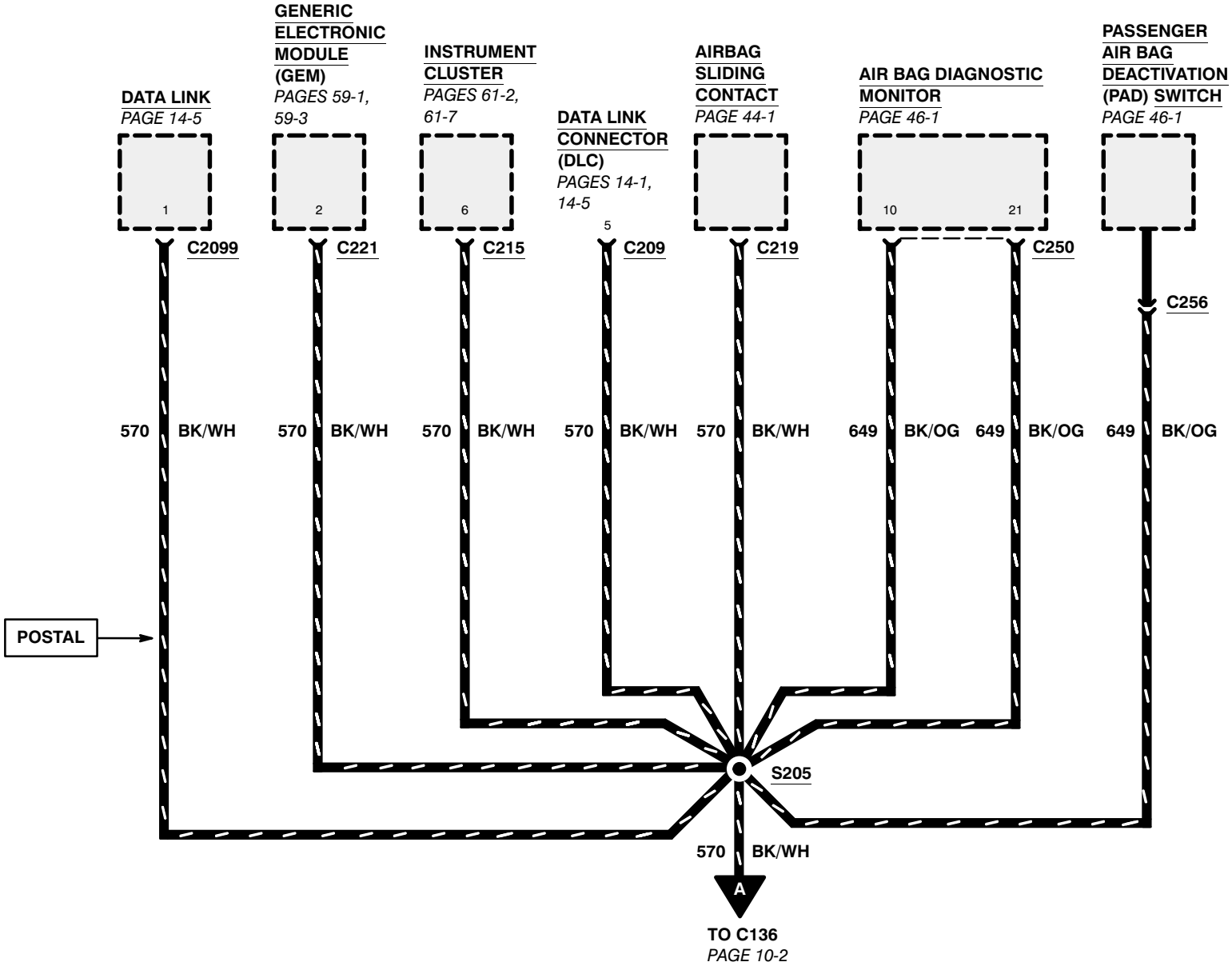
DUAL FILAMENT LIGHT BULB



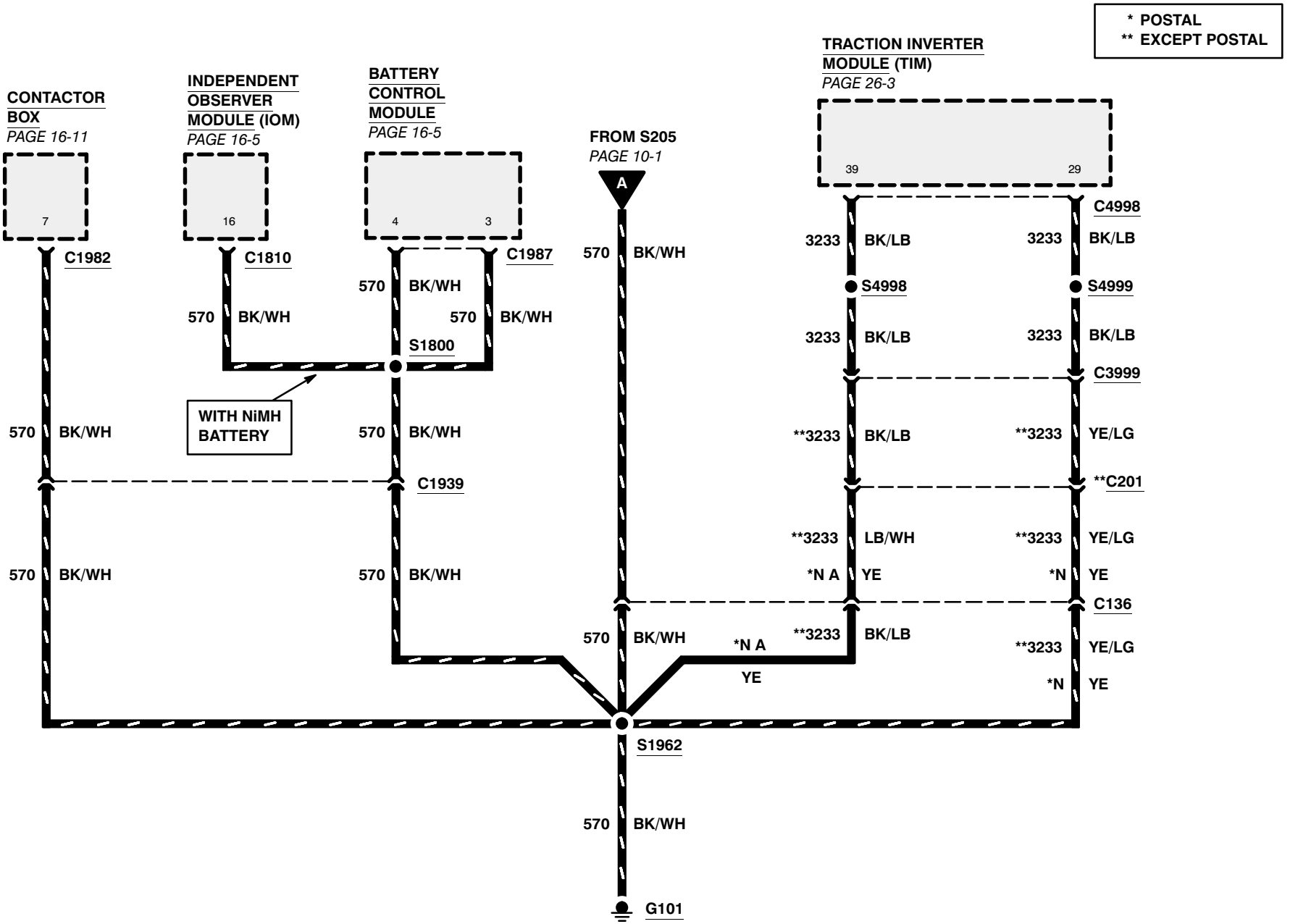
RELAY
CONTACTS CHANGE POSITION WITH CURRENT THROUGH COIL

www.AUTOMOTIVEMECHANIC.org

10-1 GROUNDS



www.AUTOMOTIVEMECHANIC.ORG

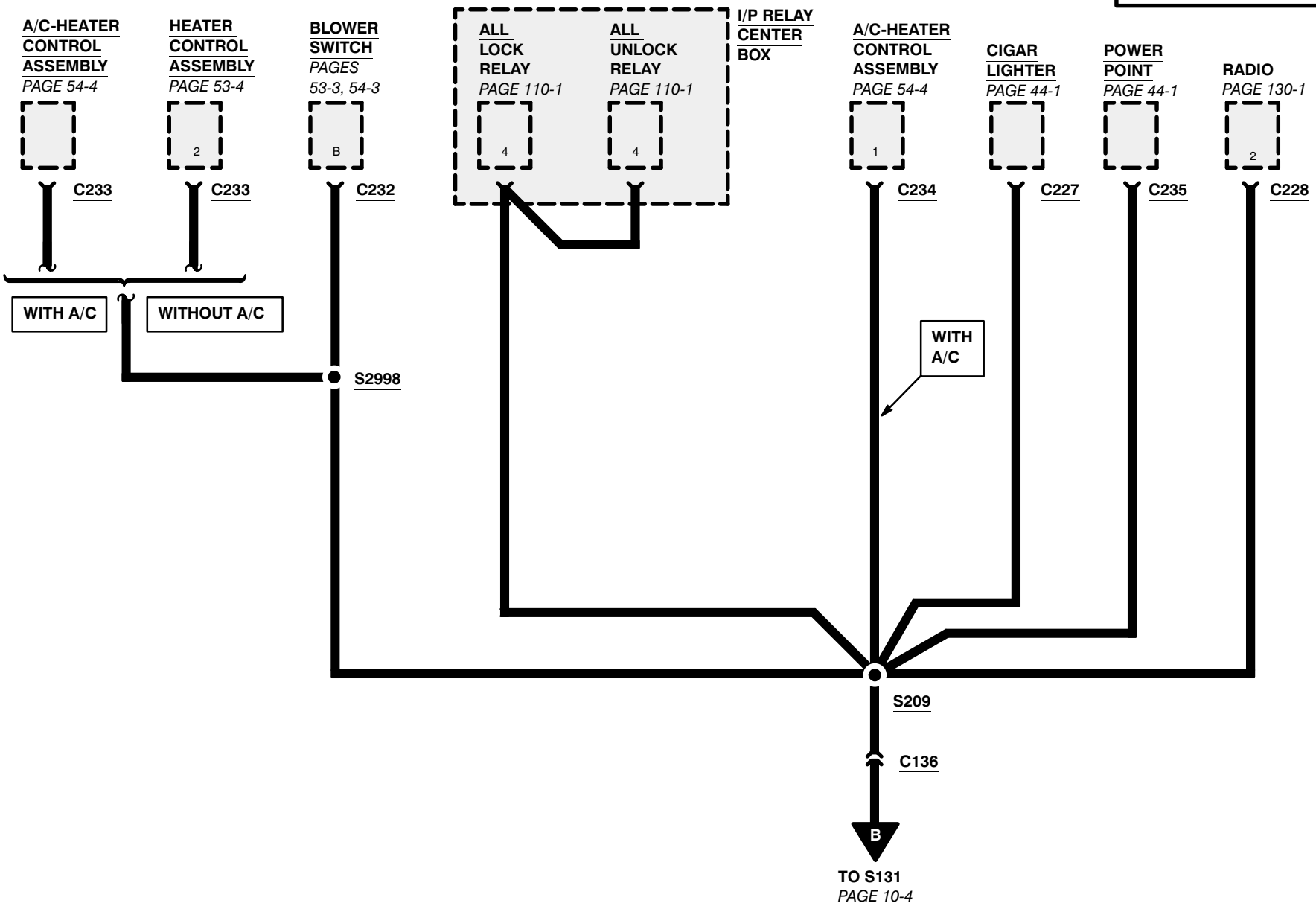


www.AUTOMOTIVEMECHANIC.org

10-3 GROUNDS

EXCEPT POSTAL

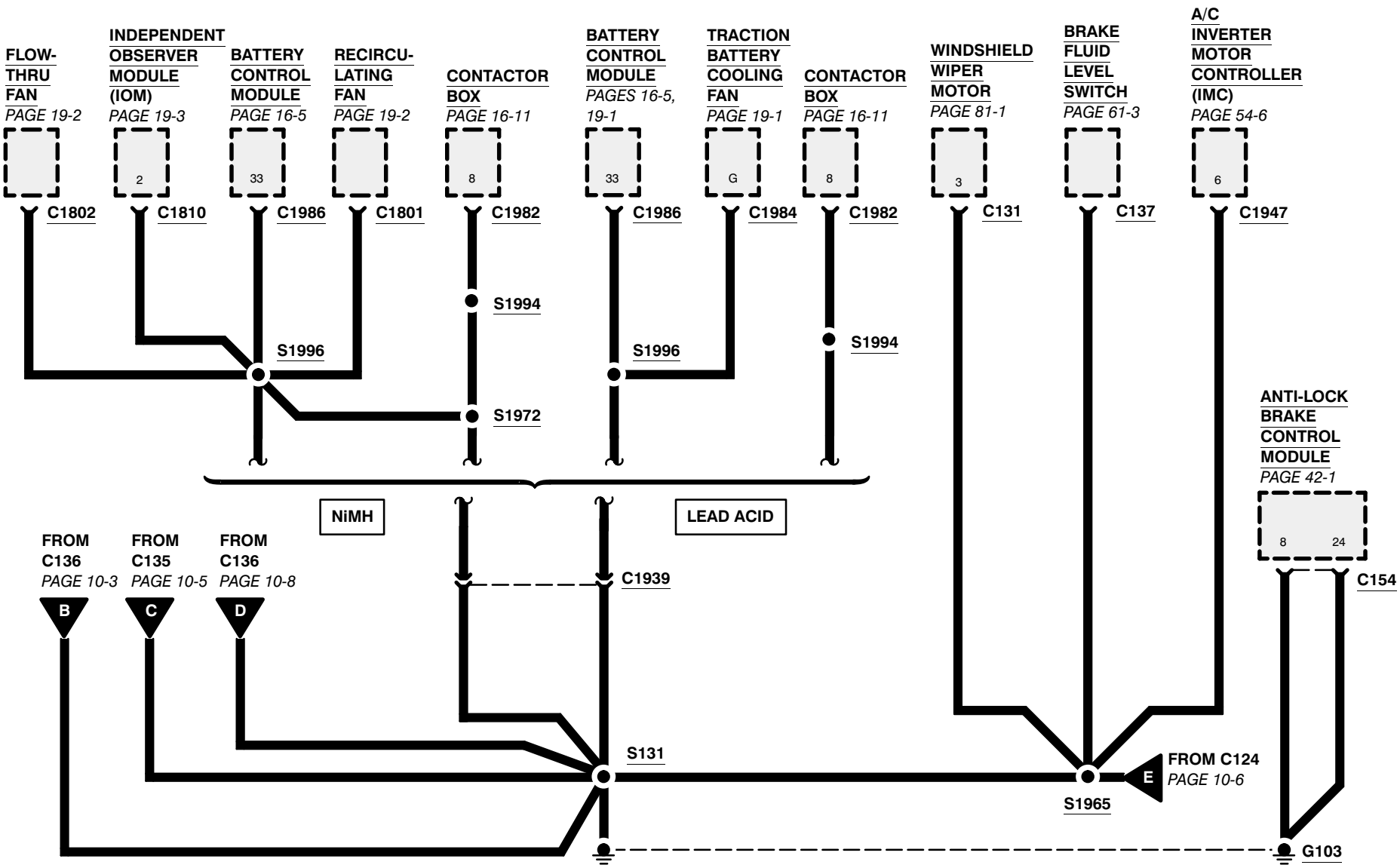
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

All wires are 57 (BK) unless otherwise noted.

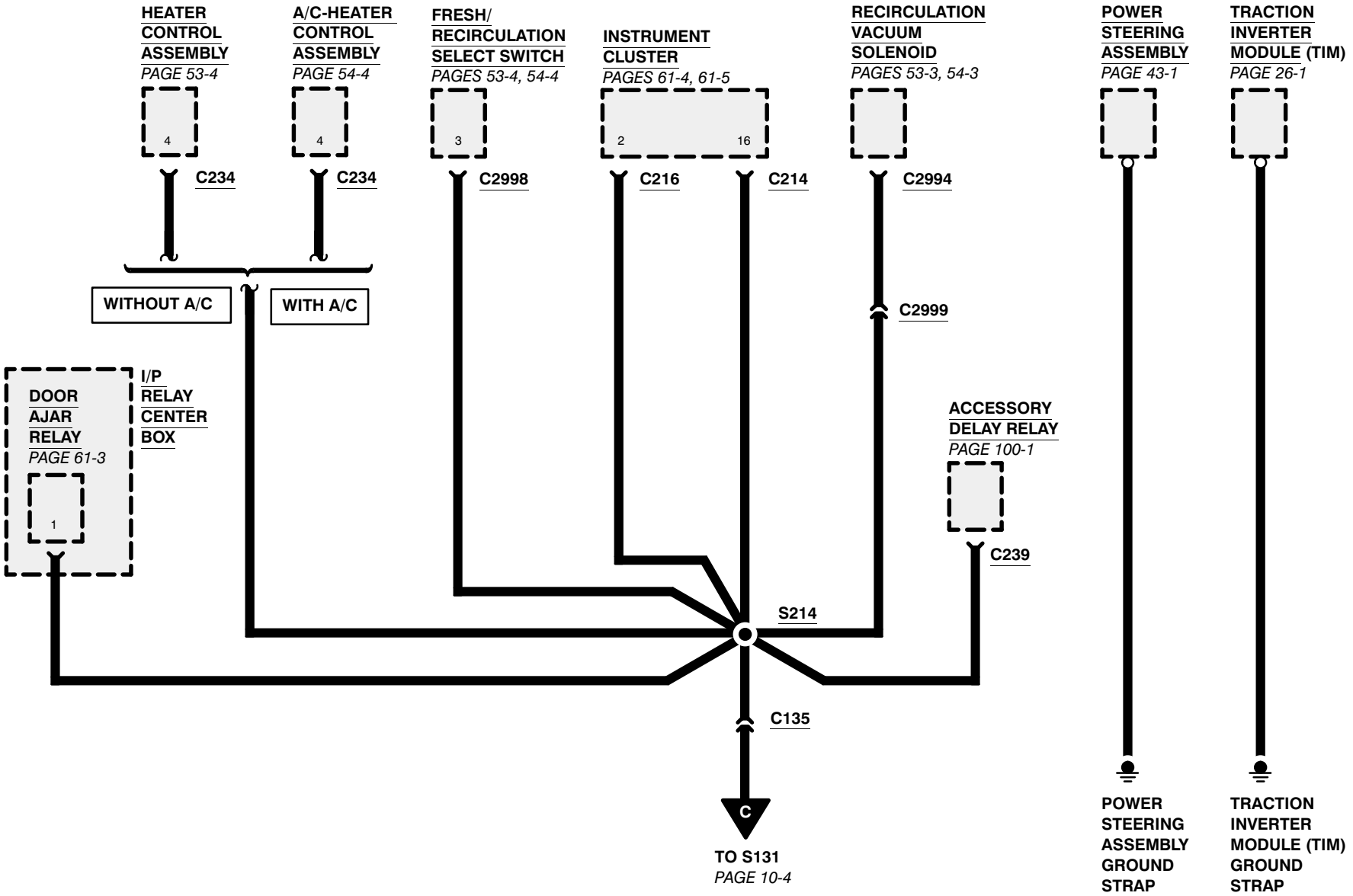


www.AUTOMOTIVEMECHANIC.ORG

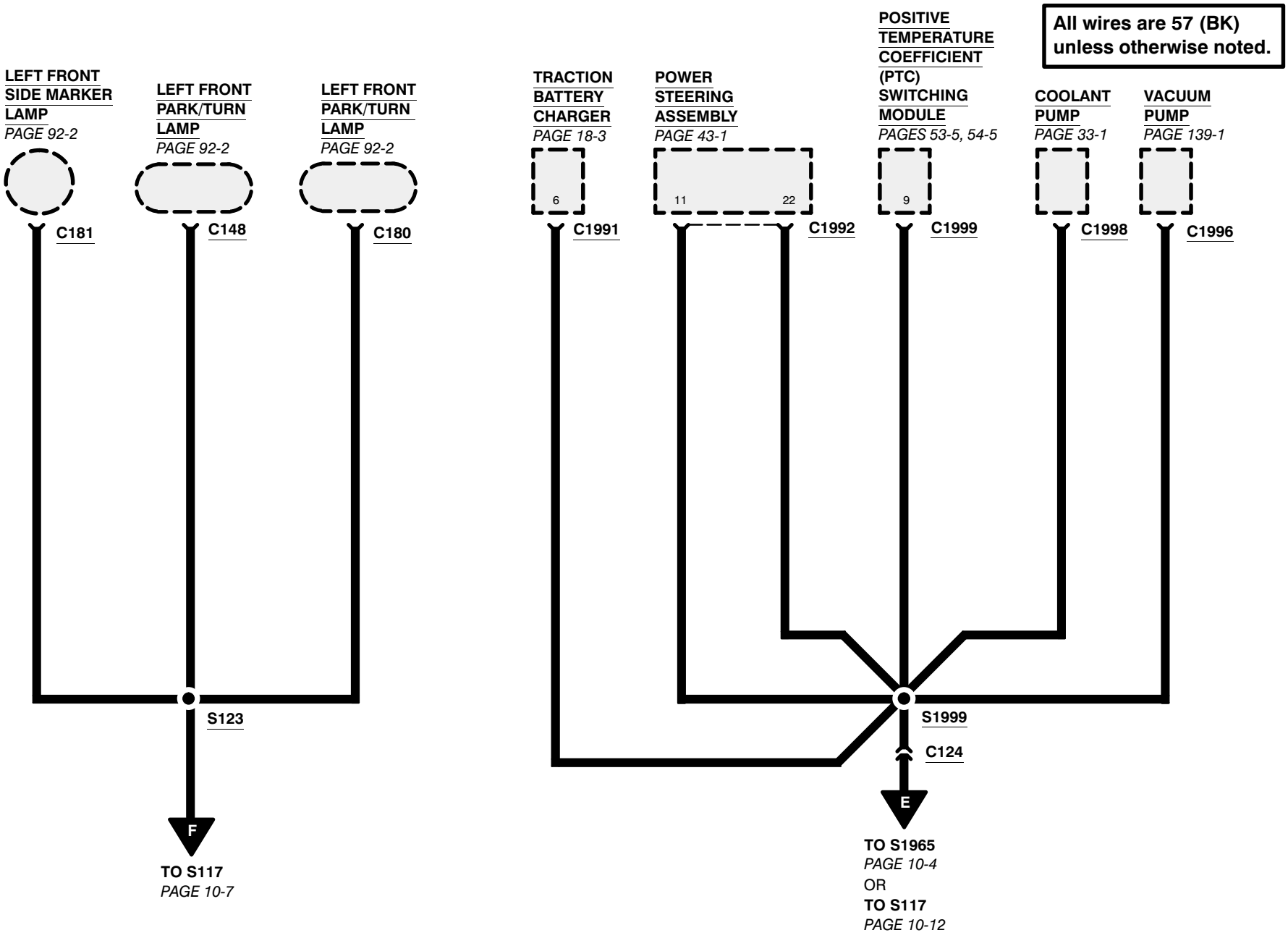
10-5 GROUNDS

EXCEPT POSTAL

All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.ORG

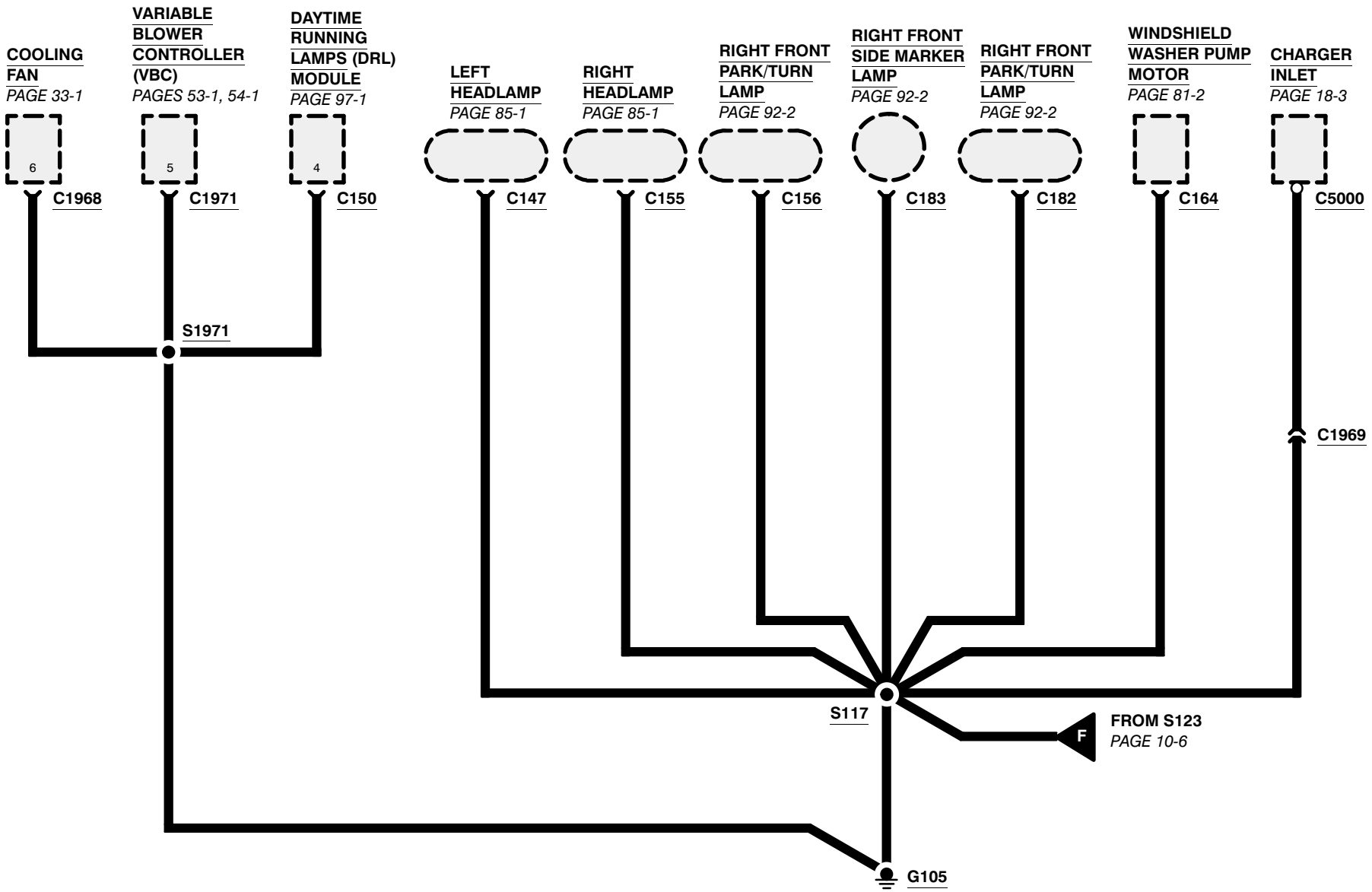


www.AUTOMOTIVEMECHANIC.org

10-7 GROUNDS

EXCEPT POSTAL

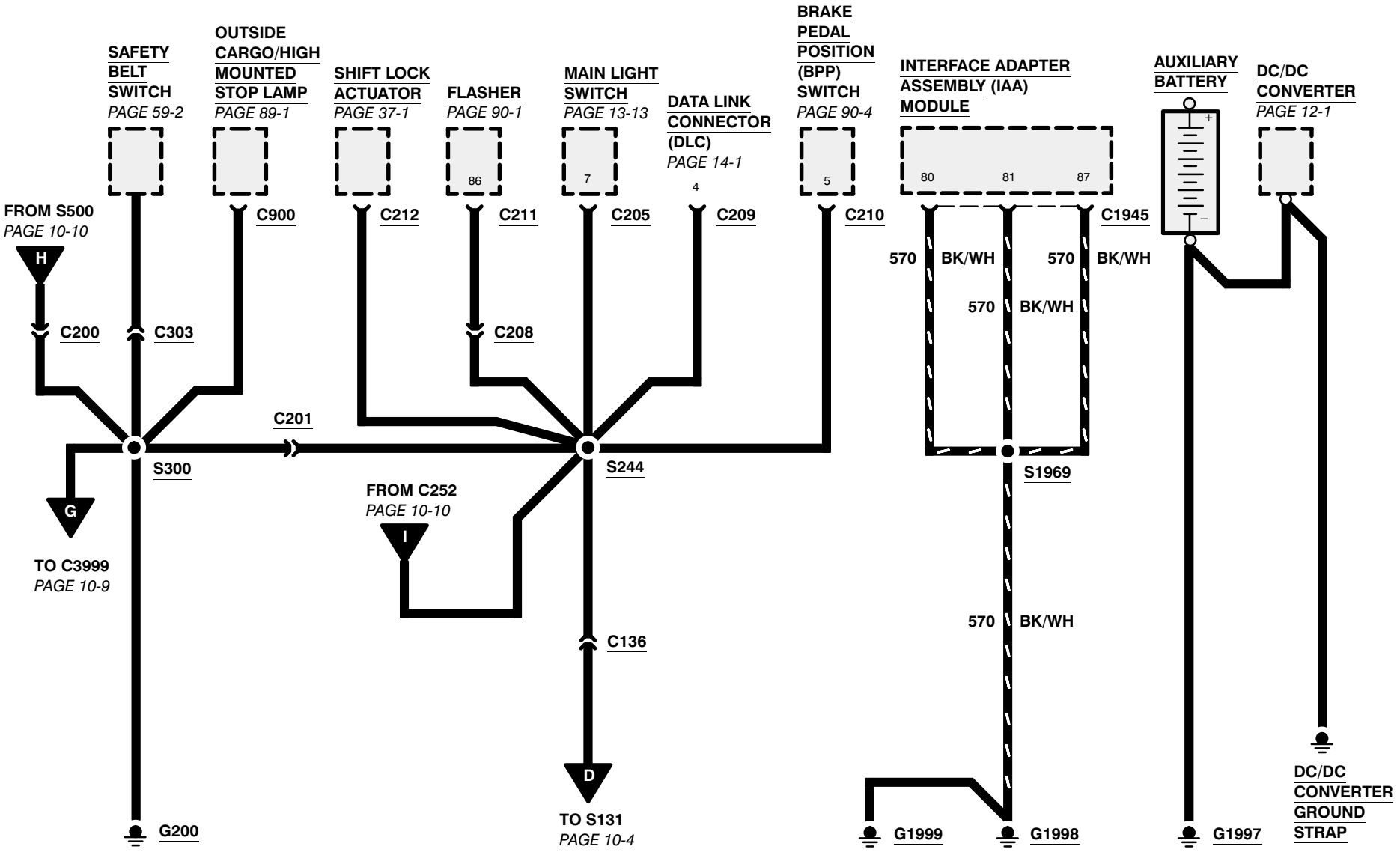
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

All wires are 57 (BK) unless otherwise noted.

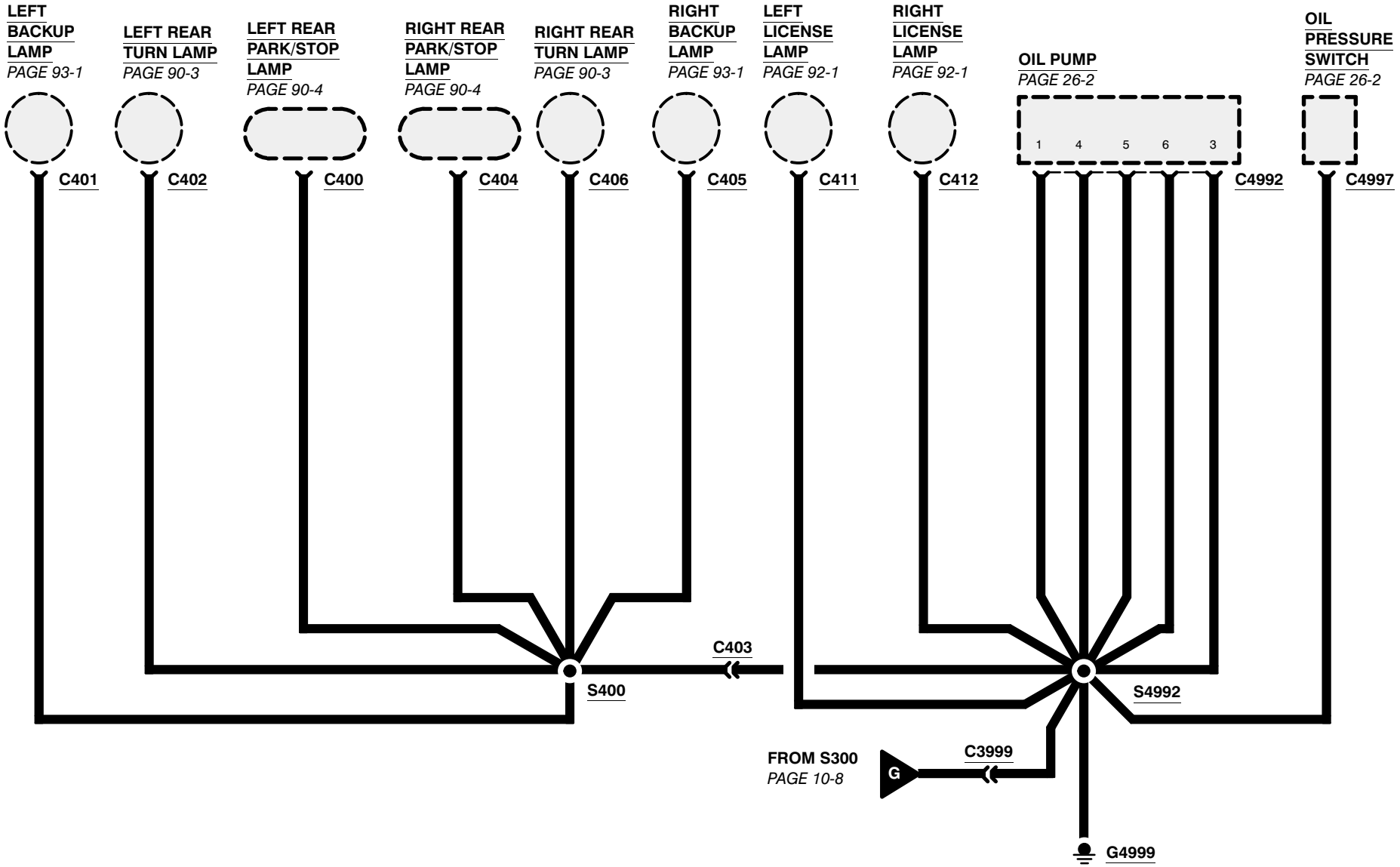


www.AUTOMOTIVEMECHANIC.org

10-9 GROUNDS

EXCEPT POSTAL

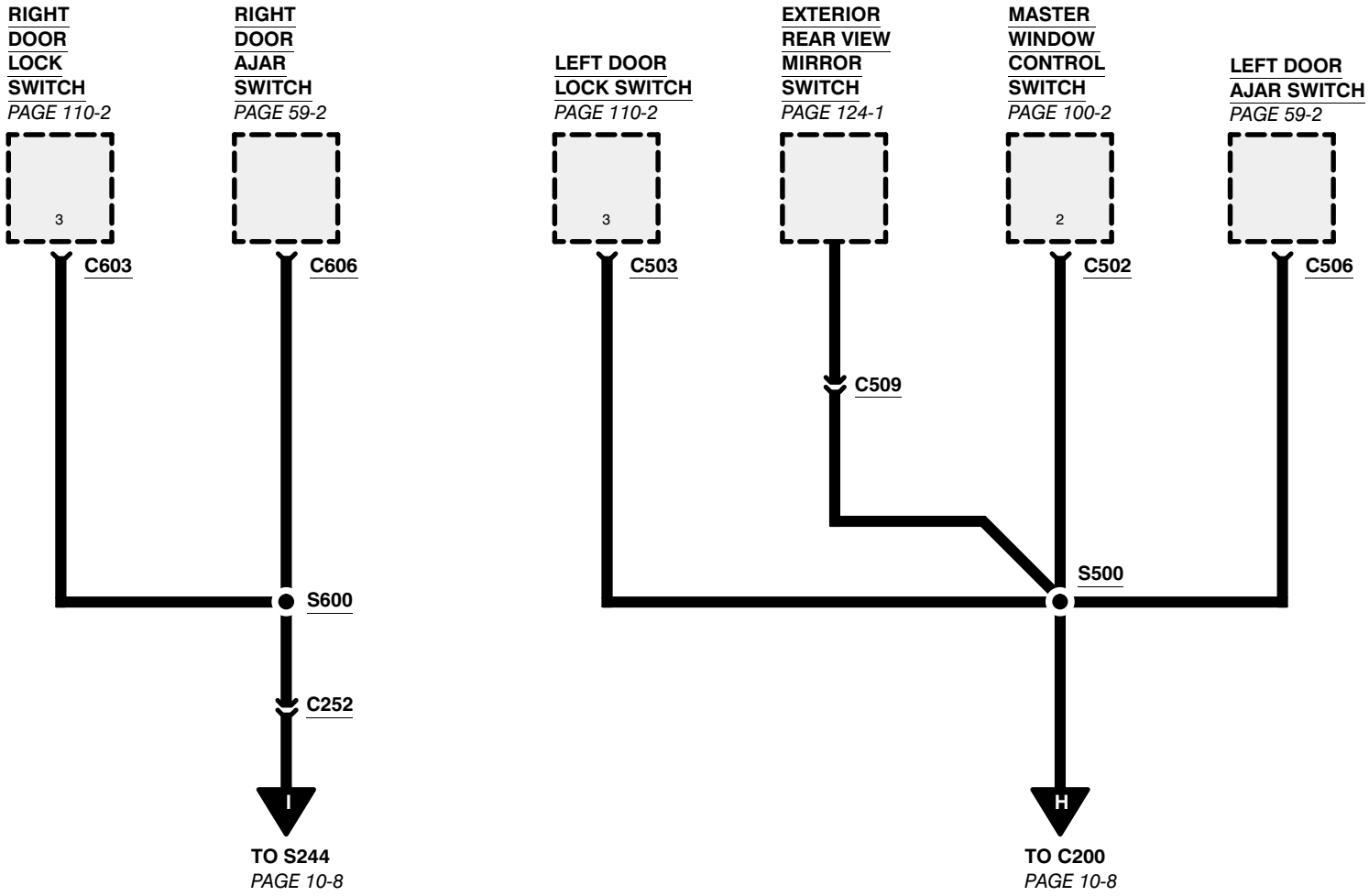
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.ORG

EXCEPT POSTAL

All wires are 57 (BK) unless otherwise noted.

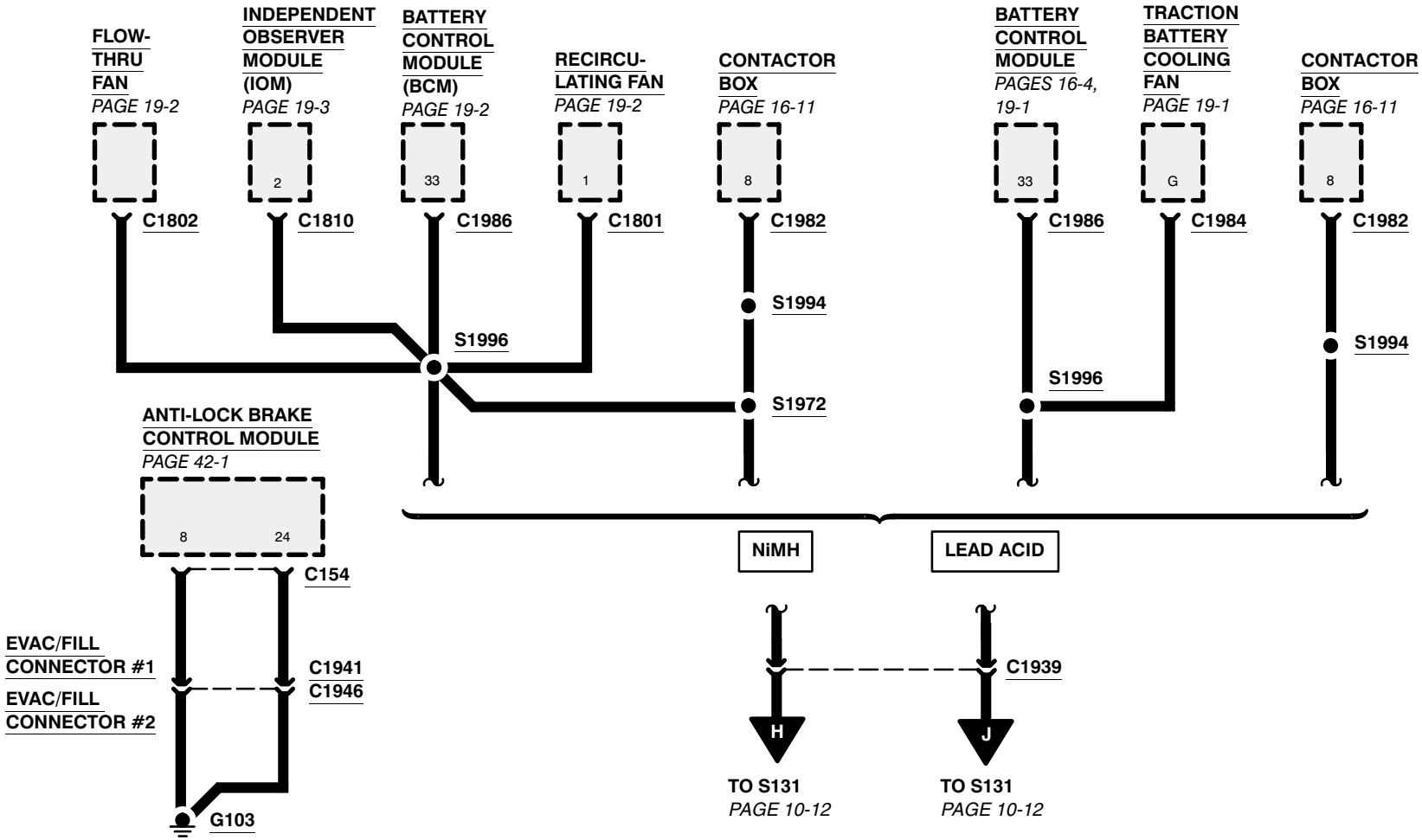


www.AUTOMOTIVEMECHANIC.org

10-11 GROUNDS

POSTAL

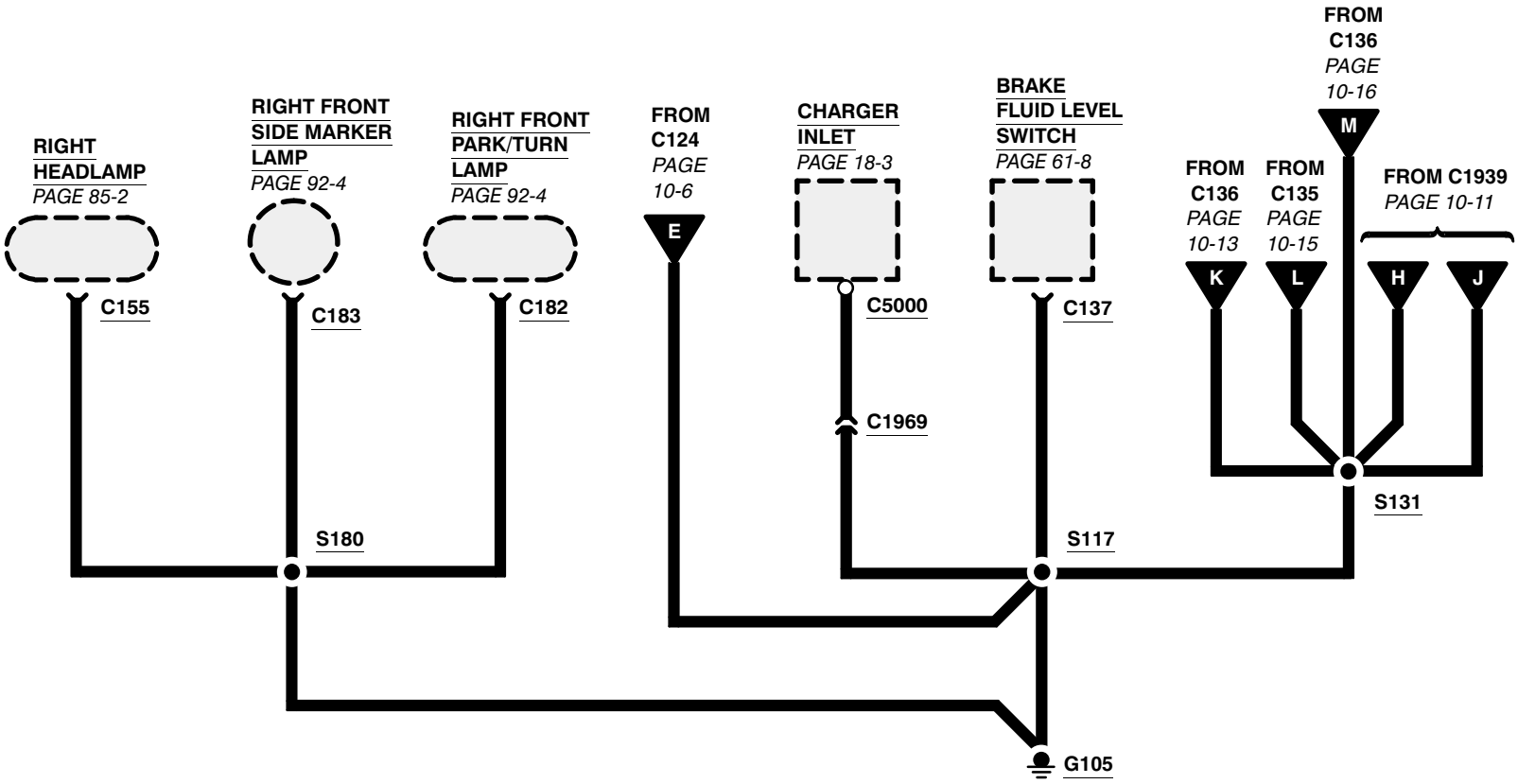
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.org

POSTAL

All wires are 57 (BK) unless otherwise noted.

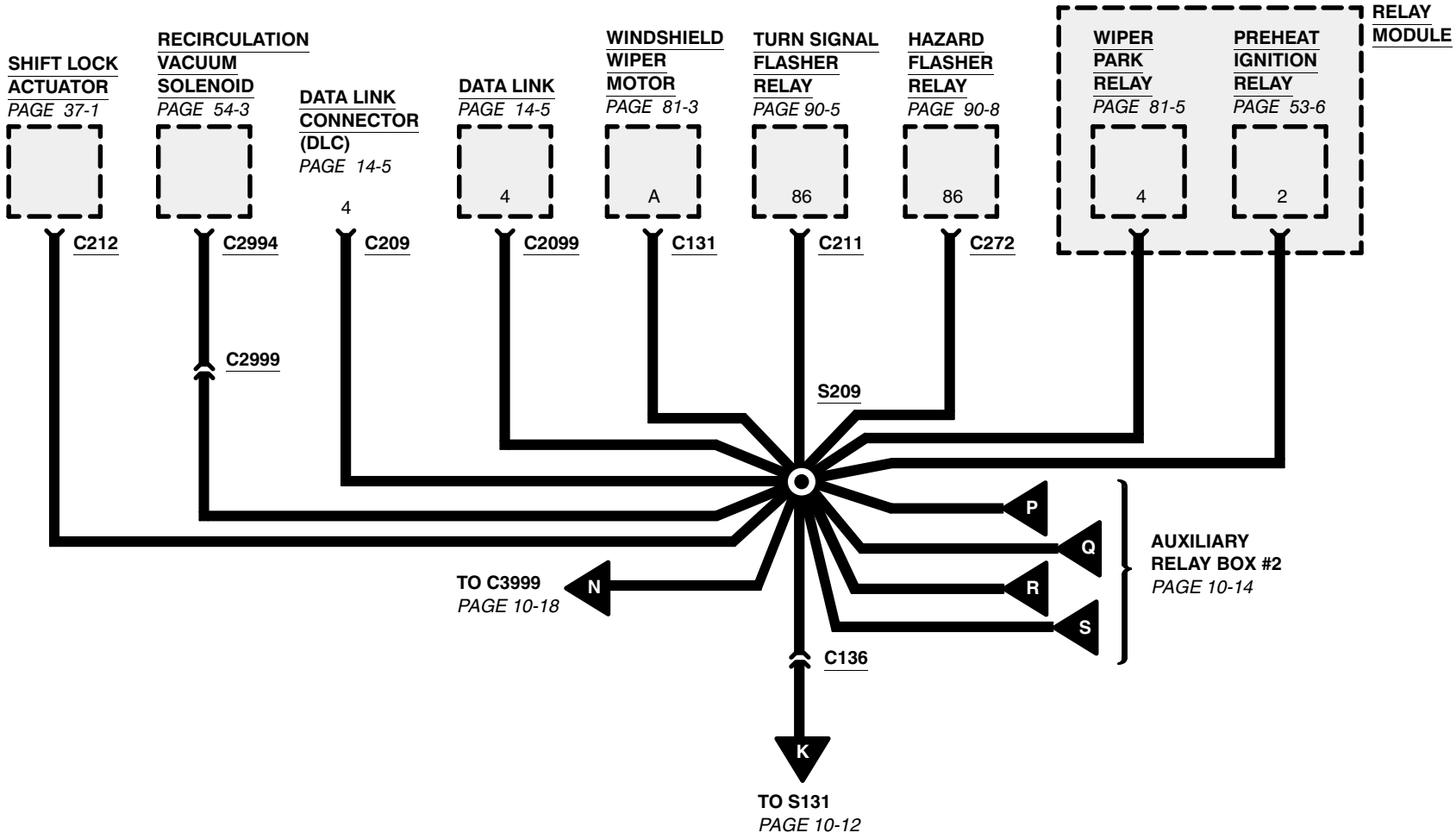


www.AUTOMOTIVEMECHANIC.org

10-13 GROUNDS

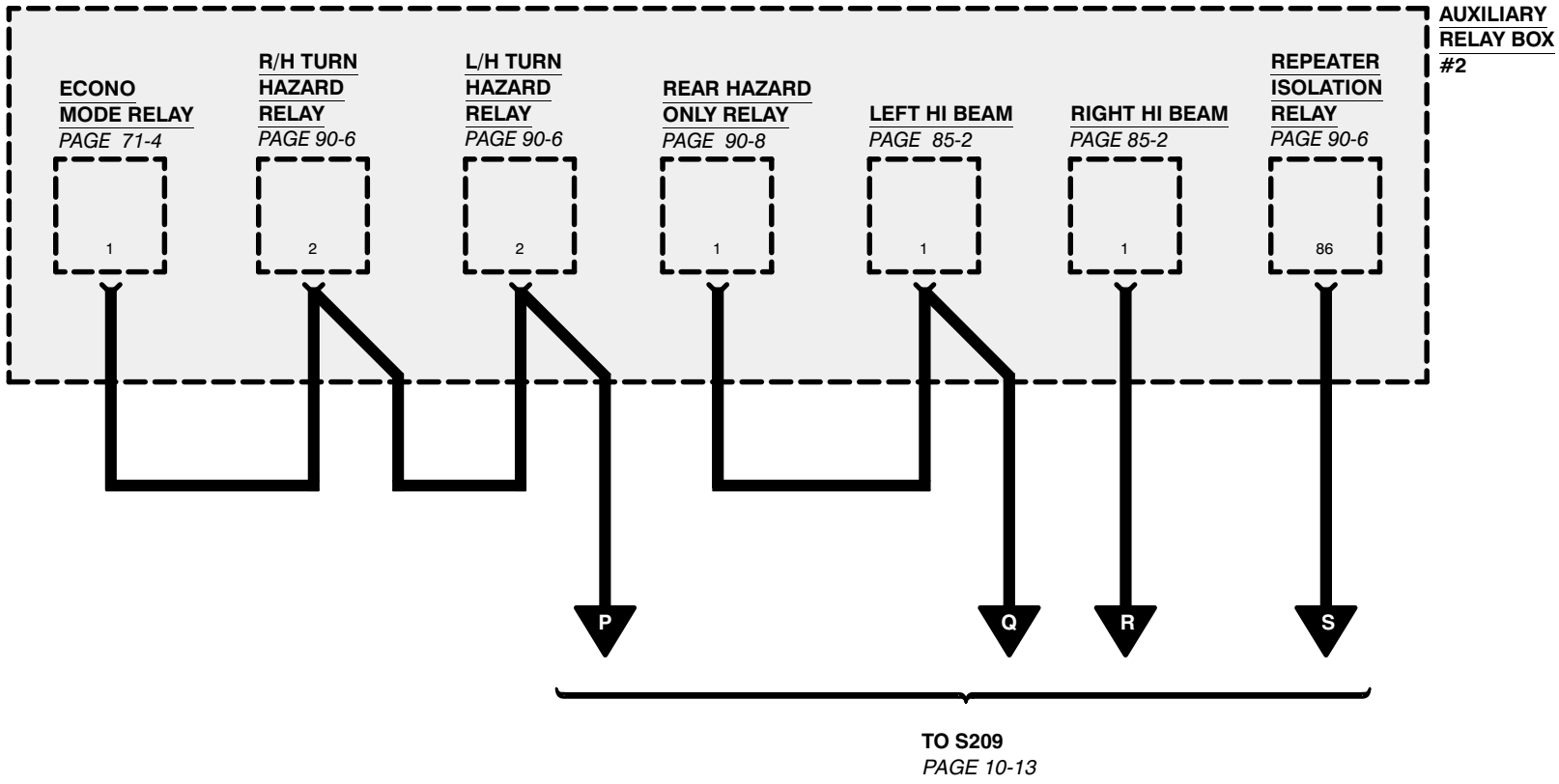
POSTAL

All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.org

All wires are 57 (BK) unless otherwise noted.

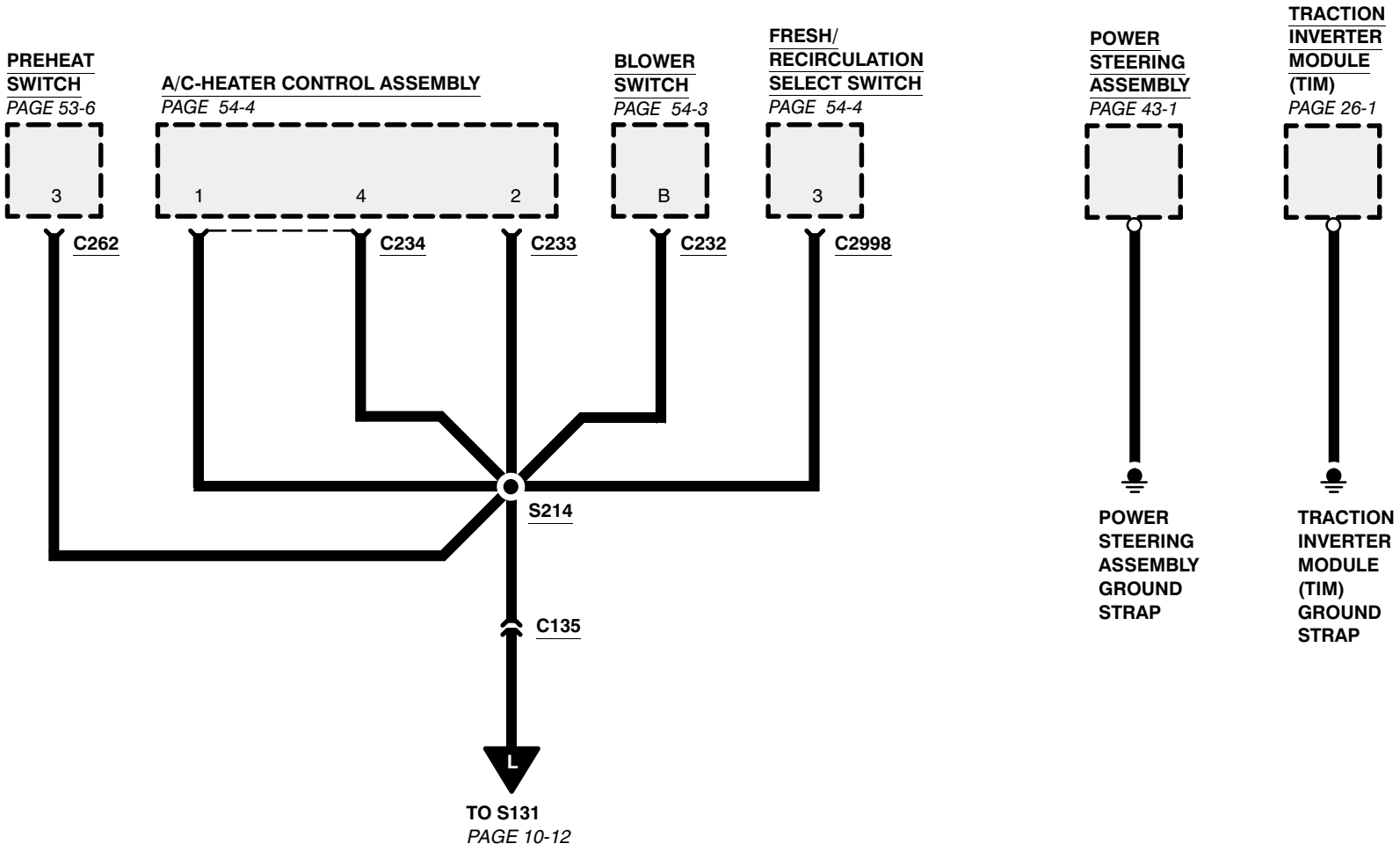


www.AUTOMOTIVEMECHANIC.ORG

10-15 GROUNDS

POSTAL

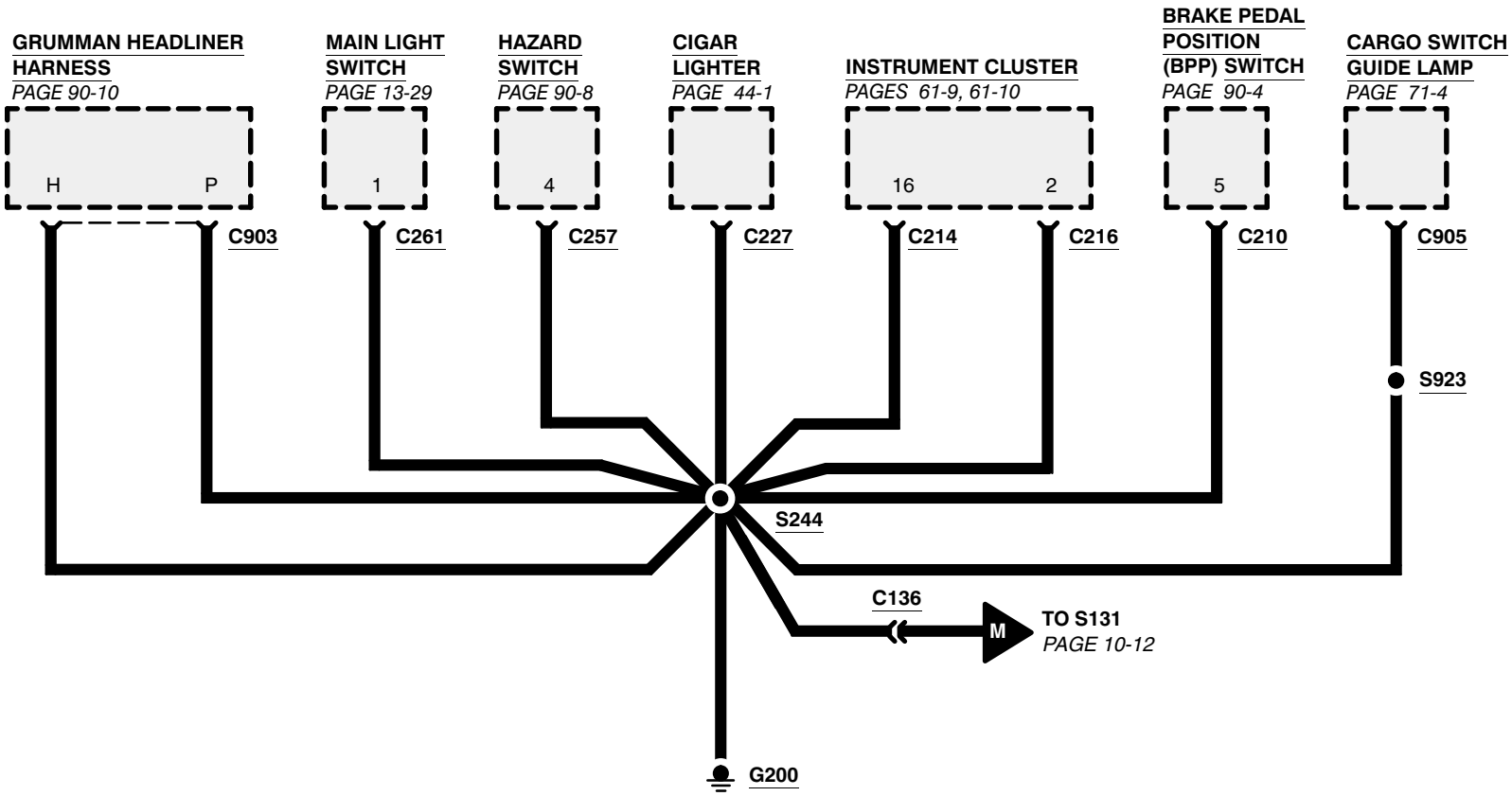
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.ORG

POSTAL

All wires are 57 (BK) unless otherwise noted.

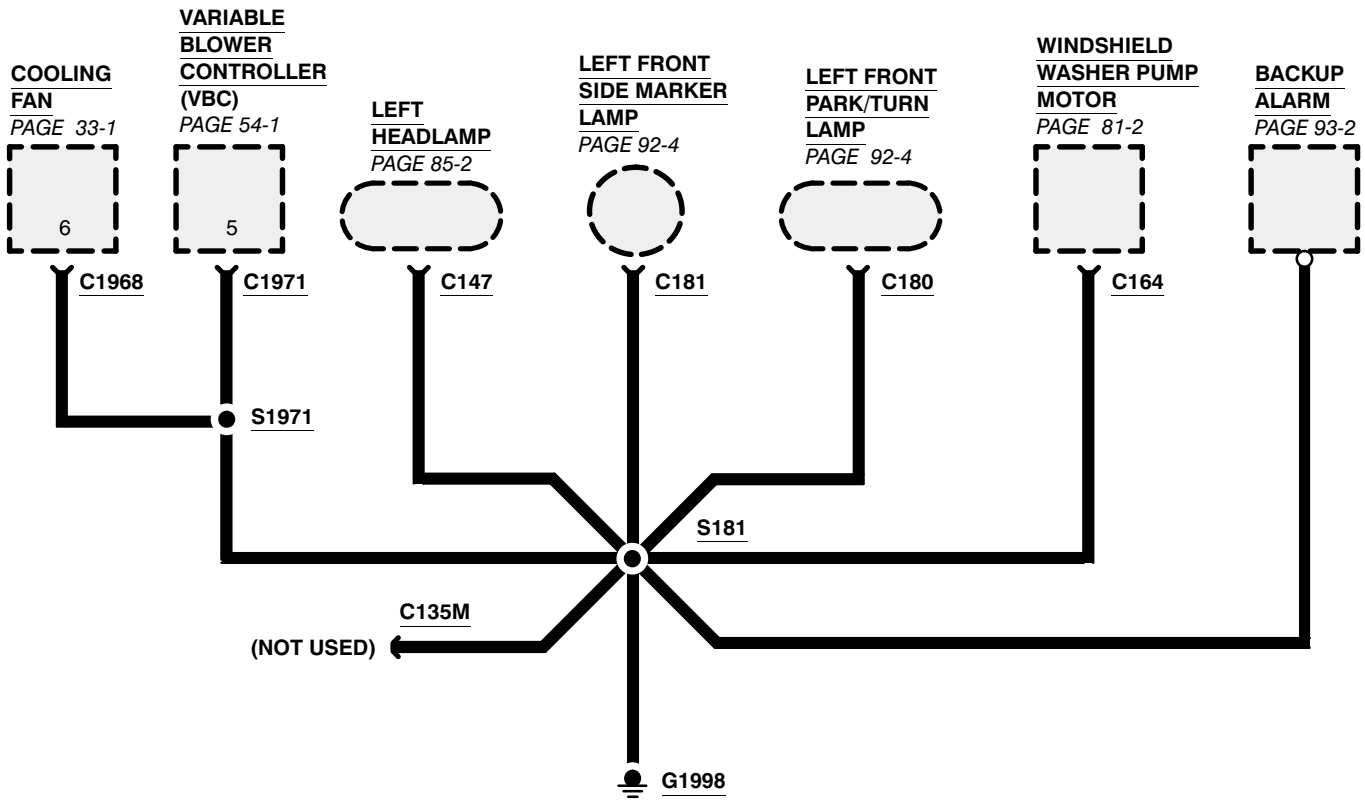


www.AUTOMOTIVEMECHANIC.org

10-17 GROUNDS

POSTAL

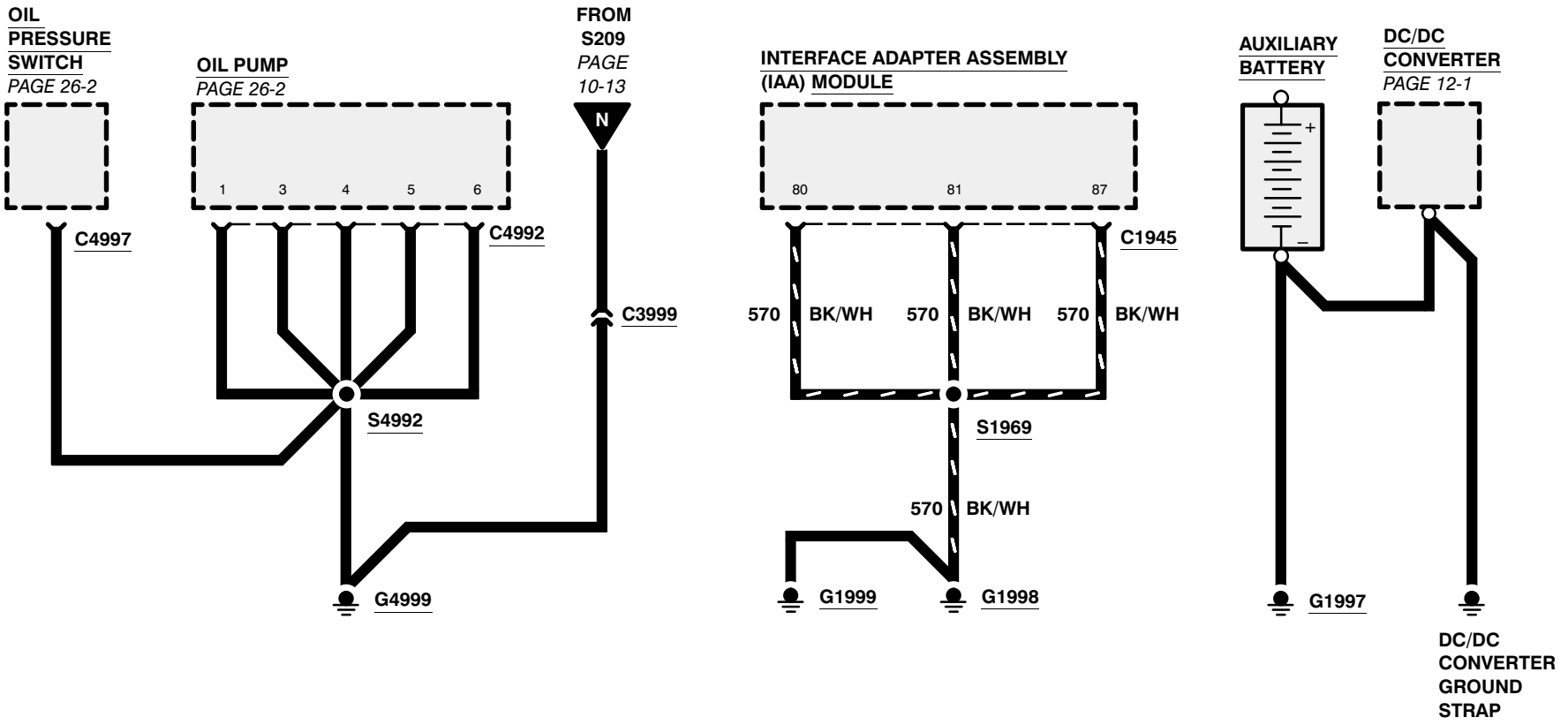
All wires are 57 (BK) unless otherwise noted.



www.AUTOMOTIVEMECHANIC.ORG

POSTAL

All wires are 57 (BK) unless otherwise noted.



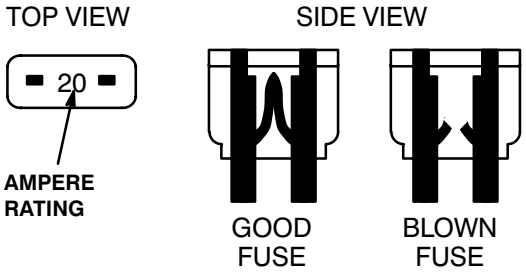
www.AUTOMOTIVEMECHANIC.ORG

11-1 FUSE PANEL/CIRCUIT PROTECTION

CIRCUIT PROTECTION DEVICES

Electrical circuits on this vehicle may be protected by fuses, fusible links, fusible link cartridges, circuit breakers, or a combination of these devices.

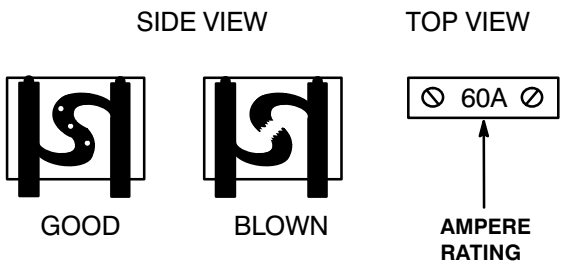
BLADE TYPE FUSE



Blade type fuses have a transparent plastic housing. To check a fuse, pull it from the fuse panel and look at the fuse element through the housing. Always replace a blown fuse with a new fuse that has the same ampere rating.

The ampere rating of a blade type fuse can also be determined by following the color code shown in the chart.

MAXI-FUSE CARTRIDGE



Maxi-fuse cartridges have a transparent colored plastic housing. To check a maxi-fuse cartridge, look at the fuse element through the side of the housing.

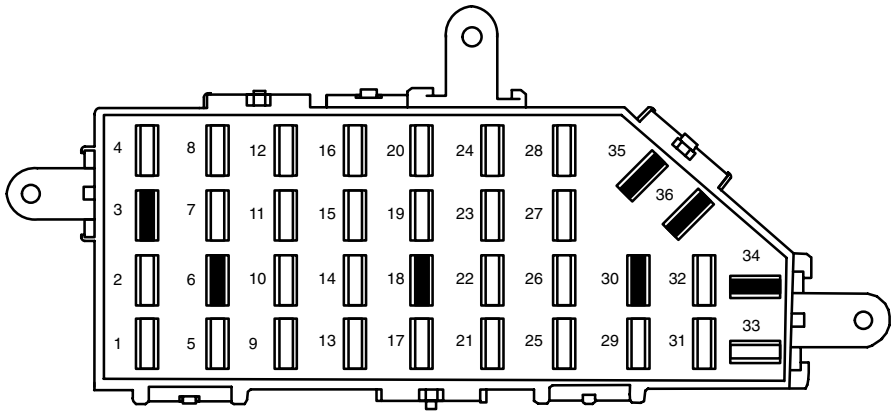
To replace a maxi-fuse cartridge, pull it from the fuse box or panel. Always replace a blown maxi-fuse cartridge with a new one having the same ampere rating.

The ampere rating of a maxi-fuse cartridge can also be determined by following the color code shown in the chart.

FUSE COLOR CODING	
AMPERE RATING	**HOUSING COLOR**
4	Pink
5	Tan
7.5	Brown
10	Red
15	Light Blue
20	Yellow
25	Natural
30	Light Green
40	Amber
50	Red
60	Blue

www.AUTOMOTIVEMECHANIC.org

* POSTAL ELECTRIC VEHICLE



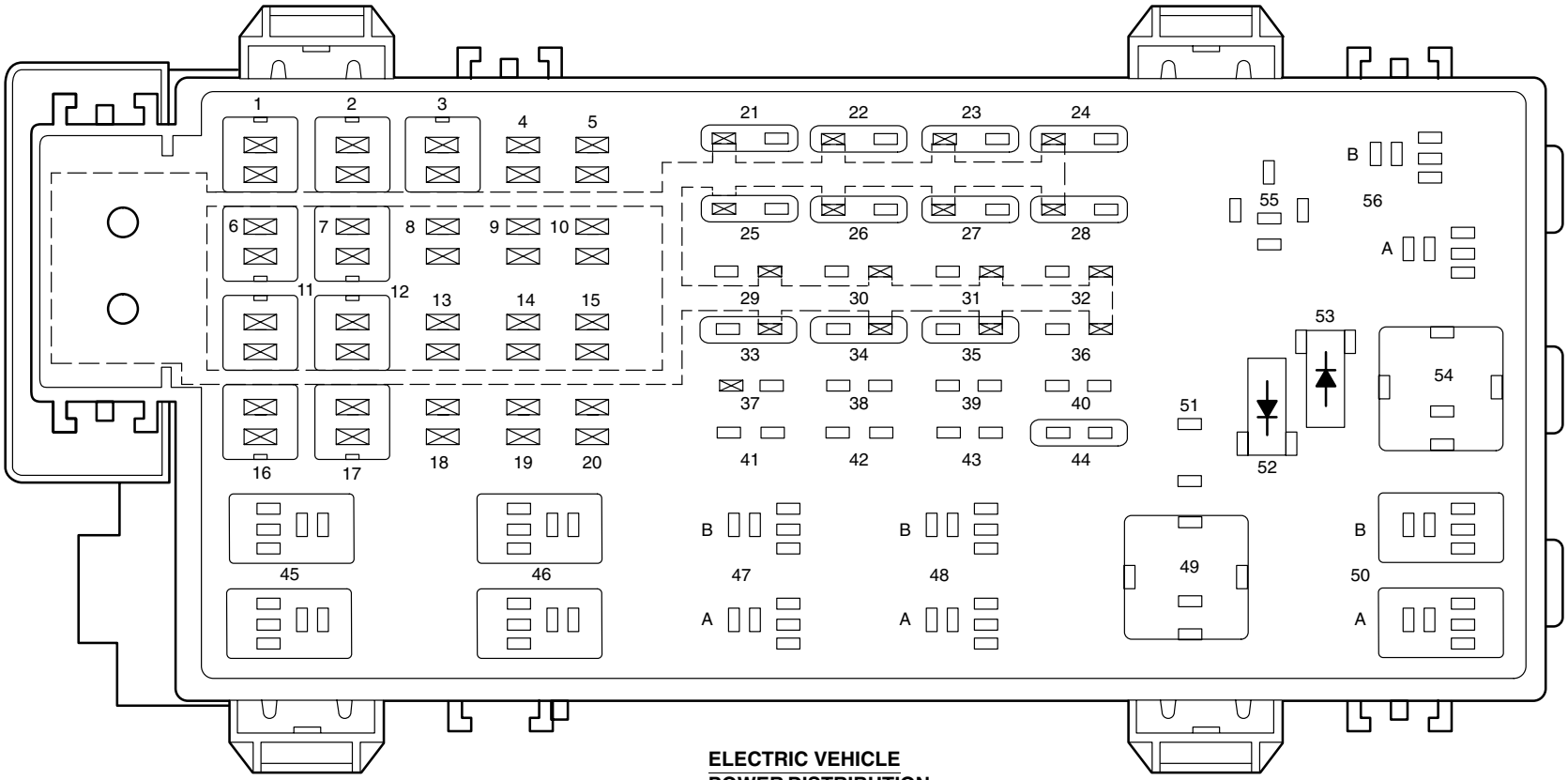
I/P FUSE PANEL

FUSE POSITION	AMPS	CIRCUITS PROTECTED
1	10	Instrument Cluster
2	7.5	Air Bag Diagnostic Monitor
3	–	NOT USED
4	10	Left Headlamp
5	7.5	Data Link Connector (DLC)
6	–	NOT USED
7	7.5	Instrument Illumination Dimming Module
8	10	Right Headlamp
9	10	Traction Inverter Module (TIM)
10	7.5	Generic Electronic Module (GEM), Shift Lock Actuator
11	7.5	Traction Inverter Module (TIM)
12	10	Radio
13	10	Stop Lamp Relay, Stop Lamp Switch
14	10	EVAC/Fill Connector #1, Anti-Lock Brake Control Module
15	7.5	Main Light Switch, Instrument Cluster
16	30	Windshield Wiper Motor, Windshield Wiper Speed Relay, Windshield Wiper Relay, Windshield Washer Pump Motor Relay
17	10	Cigar Lighter
18	–	NOT USED
19	15	Steering Wheel Sensor, Interface Adapter Assembly (IAA) Module, Contactor Box, Battery Control Module, Power Steering Assembly, Independent Observer Module (IOM)
20	10	Radio, Generic Electronic Module (GEM)
21	15	Signal Flasher
22	15	Flasher, Multifunction Switch
23	15	Main Light Switch
24	7.5	Traction Inverter Module (TIM)
25	10, *7.5	Generic Electronic Module (GEM)
26	15	Digital Transmission Range (DTR) Sensor, Backup Lights, DRL Module
27	10	Battery Saver Relay
28	7.5	Generic Electronic Module (GEM)
29	10	Radio
30	–	NOT USED
31	15	Power Door Locks
32	7.5	Power Mirrors
33	15	Instrument Cluster
34	–	NOT USED
35	–	NOT USED
36	–	NOT USED

www.AUTOMOTIVE MECHANIC.ORG

11-3 FUSE PANEL/CIRCUIT PROTECTION

EXCEPT POSTAL



ELECTRIC VEHICLE POWER DISTRIBUTION BOX (EVPDB)

www.AUTOMOTIVEMECHANIC.org

POSITION	FUSE/ RELAY	AMPS	CIRCUITS PROTECTED
1	Maxi	50	Ignition Switch
2	Maxi	40	I/P Fuse Panel
3	Maxi	30	Anti-Lock Brake Control Module
4	–	–	NOT USED
5	–	–	NOT USED
6	Maxi	60	Anti-Lock Brake Control Module
7	Maxi	50	Fan Speed Relays, Cooling Fan
8	–	–	NOT USED
9	–	–	NOT USED
10	–	–	NOT USED
11	Maxi	20	Headlamps
12	Maxi	20	Lube Pump
13	–	–	NOT USED
14	–	–	NOT USED
15	–	–	NOT USED
16	Maxi	20	Coolant Pump
17	Maxi	40	Blower Motor
18	–	–	NOT USED
19	–	–	NOT USED
20	–	–	NOT USED
21	Mini	15	Inertia Switch
22	Mini	10	Contactor Box
23	Mini	10	Interface Adapter Assembly (IAA)
24	Mini	30	Power Point
25	Mini	10	Horn
26	Mini	10	Battery Control Module (BCM), Independent Observer Module (IOM)
27	Mini	20	Vacuum Pump
28	Mini	20	Battery Charger
29	–	–	NOT USED

POSITION	FUSE/ RELAY	AMPS	CIRCUITS PROTECTED
30	–	–	NOT USED
31	–	–	NOT USED
32	–	–	NOT USED
33	Mini	20	Power Windows
34	Mini	20	Main Light Switch, Battery Saver Relay
*35	Mini	30	Traction Battery Cooling Fan
**35	Mini	15	Flow-Thru Fan
36	–	–	NOT USED
37	–	–	NOT USED
38	–	–	NOT USED
39	–	–	NOT USED
40	–	–	NOT USED
41	–	–	NOT USED
42	–	–	NOT USED
43	–	–	NOT USED
44	Mini	5	Anti-Lock Brake Motor
45	Relay	–	Horn Relay
46	Relay	–	Wiper High/Low Relay
47	–	–	NOT USED
48	–	–	NOT USED
49	Relay	–	Blower Motor
50	Relay	–	Washer Pump, Brake ON/OFF
51	–	–	NOT USED
52	Diode	–	Diode
53	Diode	–	Diode
54	Relay	–	Coolant Pump
55	–	–	NOT USED
56	–	–	NOT USED

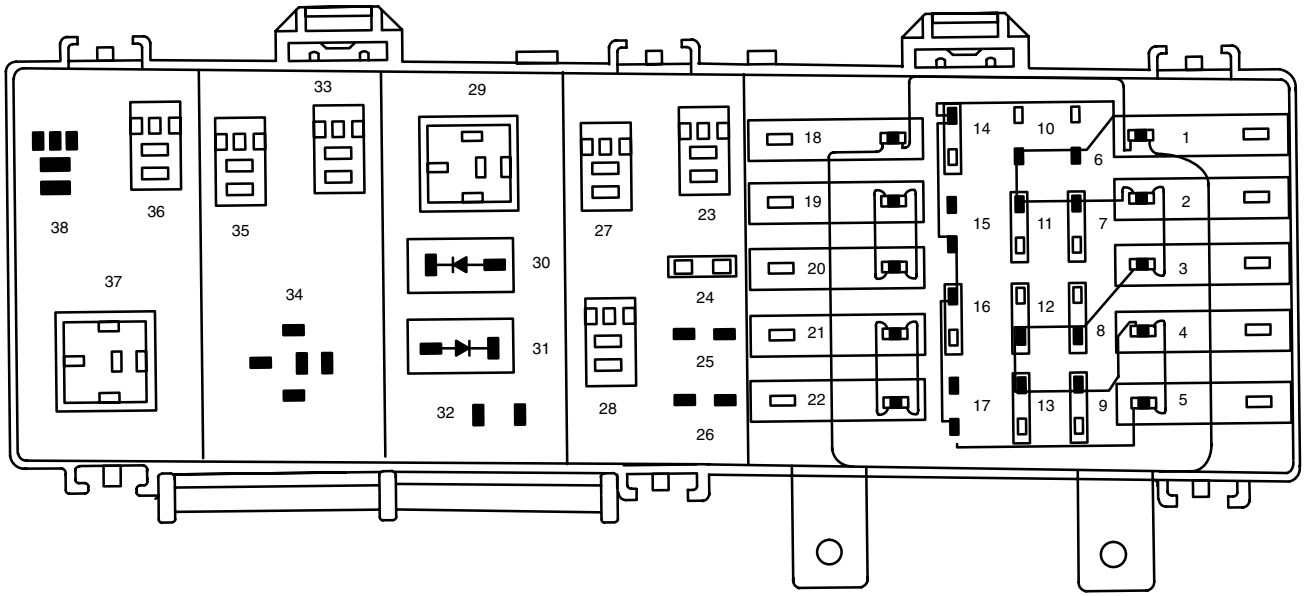
EXCEPT POSTAL

* LEAD ACID
** NiMH

www.AUTOMOTIVEMECHANIC.ORG

11-5 FUSE PANEL/CIRCUIT PROTECTION

POSTAL



ELECTRIC VEHICLE POWER DISTRIBUTION BOX (EVPDB)

www.AUTOMOTIVEMECHANIC.ORG

POSITION	FUSE/ RELAY	AMPS	CIRCUITS PROTECTED
1	Maxi	50	Ignition Switch
2	Maxi	40	I/P Fuse Panel Fuses 1, 5, 9, 13, 17, 21, 25 and 29
3	Maxi	30	EVAC/Fill Connector, Anti-Lock Brake Control Module
4	Maxi	60	EVAC/Fill Connector, Anti-Lock Brake Control Module
5	Maxi	50	Fan Speed Relays, Cooling Fan
6	–	–	NOT USED
7	Mini	15	Inertia Switch
8	Mini	10	Contactor Box
9	Mini	10	Interface Adapter Assembly (IAA) Module
10	–	–	NOT USED
11	Mini	10	Horn Relay, Horn Switch, Horn
12	Mini	10	Battery Control Module (BCM), Independent Observer Module (IOM)
13	Mini	20	Vacuum Pump Relay, Vacuum Pump, Interface Adapter Assembly (IAA) Module
14	Mini	20	Battery Charger
15	–	–	NOT USED
16	Mini	20	Park Lamps
17	–	–	NOT USED
18	Maxi	20	Main Light Switch, Multifunction Switch
19	Maxi	20	Oil Pump Relay, Oil Pump
20	Maxi	20	Coolant Pump Relay, Coolant Pump
21	Maxi	40	Blower Motor Relay, Blower Motor, Interface Adapter Assembly (IAA) Module
22	Maxi	30	Battery Pack Blower Relay
23	JSO	–	Windshield Wiper Park Relay

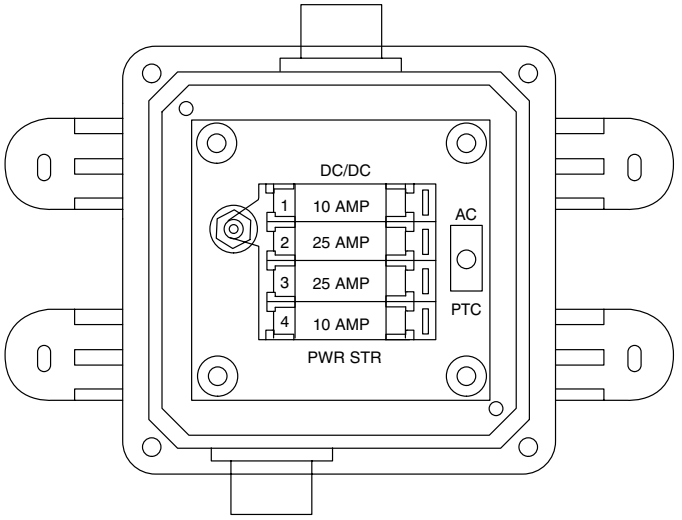
POSITION	FUSE/ RELAY	AMPS	CIRCUITS PROTECTED
24	Mini	5	ABS Motor
25	–	–	NOT USED
26	–	–	NOT USED
27	JSO	–	Winshield Wiper Hi/Low Relay
28	JSO	–	Brake On/Off (BOO) Relay
29	ISO	–	Coolant Pump Relay
30	Diode	–	Diode
31	Diode	–	Diode
32	–	–	NOT USED
33	JSO	–	Vacuum Pump Relay
34	ISO	–	Battery Pack Blower Relay
35	JSO	–	Horn Relay
36	JSO	–	Windshield Washer Pump Relay
37	ISO	–	Blower Motor Relay
38	–	–	NOT USED

POSTAL

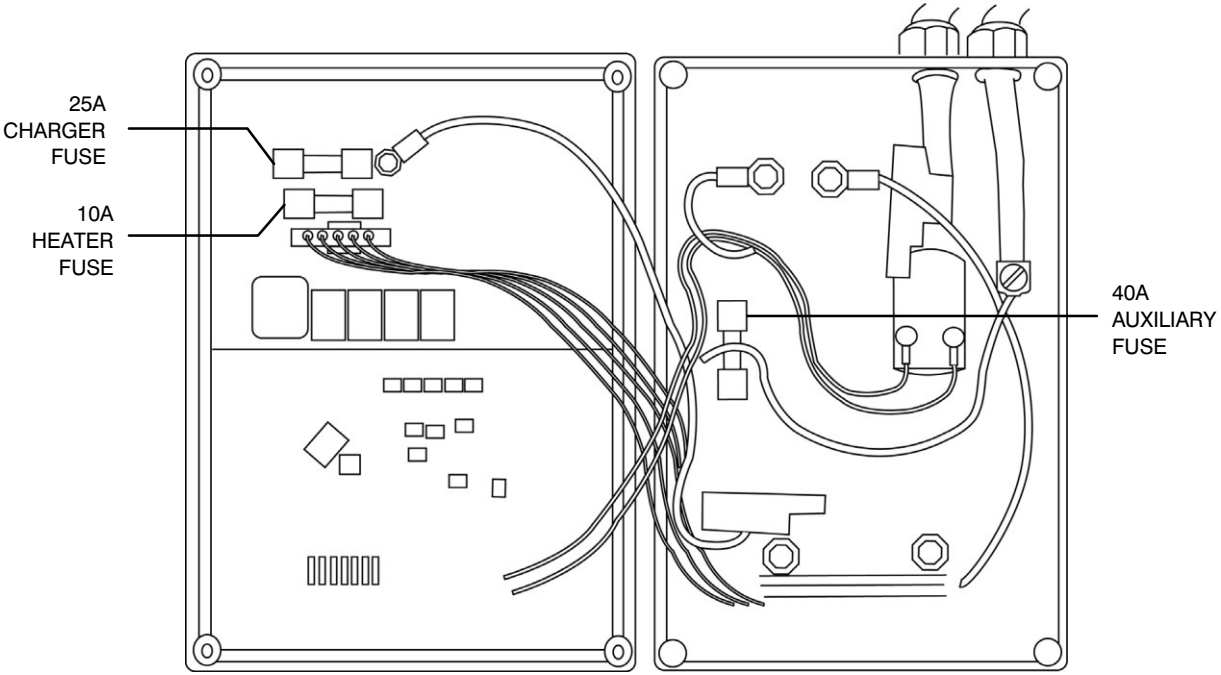
www.AUTOMOTIVEMECHANIC.org

11-7 FUSE PANEL/CIRCUIT PROTECTION

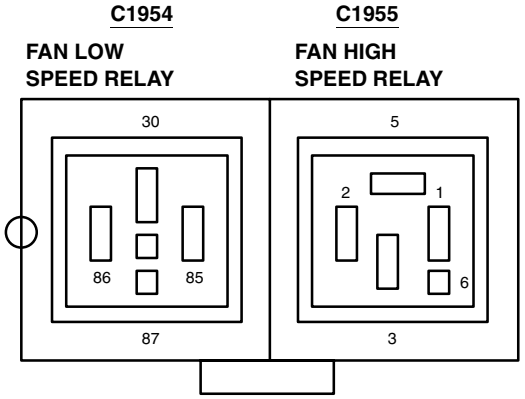
FUSE POSITION	AMPS	CIRCUITS PROTECTED
1	10A	DC/DC Converter
2	25A	AC Inverter Motor Controller (IMC)
3	25A	Positive Temperature Coefficient (PTC) Switching Module
4	10A	Power Steering Assembly



HIGH VOLTAGE POWER DISTRIBUTION BOX (HVPDB)



CONTACTOR BOX

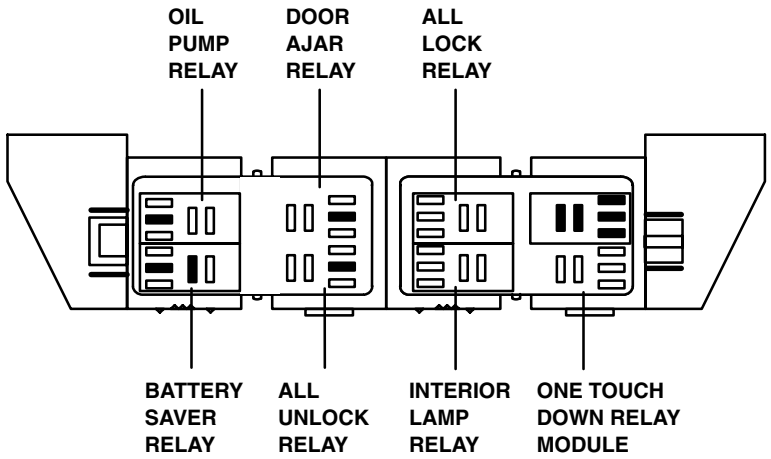


COOLING FAN RELAY BOX

www.AUTOMOTIVEMECHANIC.ORG

EXCEPT POSTAL

I/P RELAY CENTER BOX

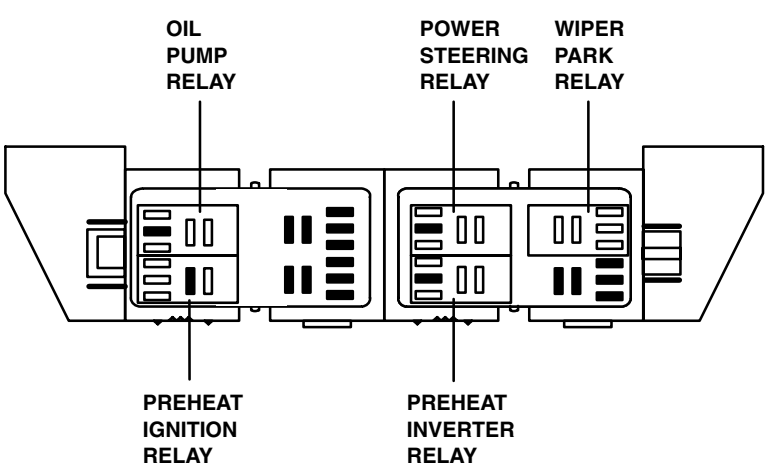


www.AUTOMOTIVEMECHANIC.org

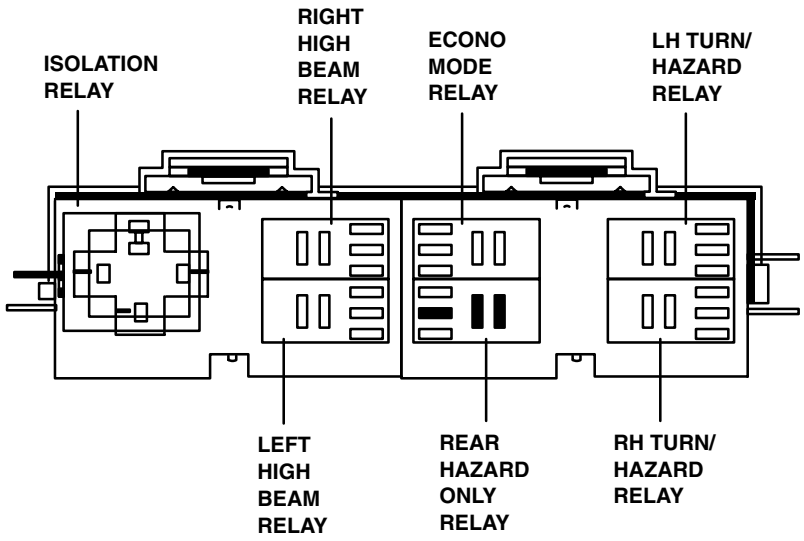
11-9 FUSE PANEL/CIRCUIT PROTECTION

POSTAL

RELAY MODULE



AUXILIARY RELAY BOX #2



www.AUTOMOTIVEMECHANIC.org

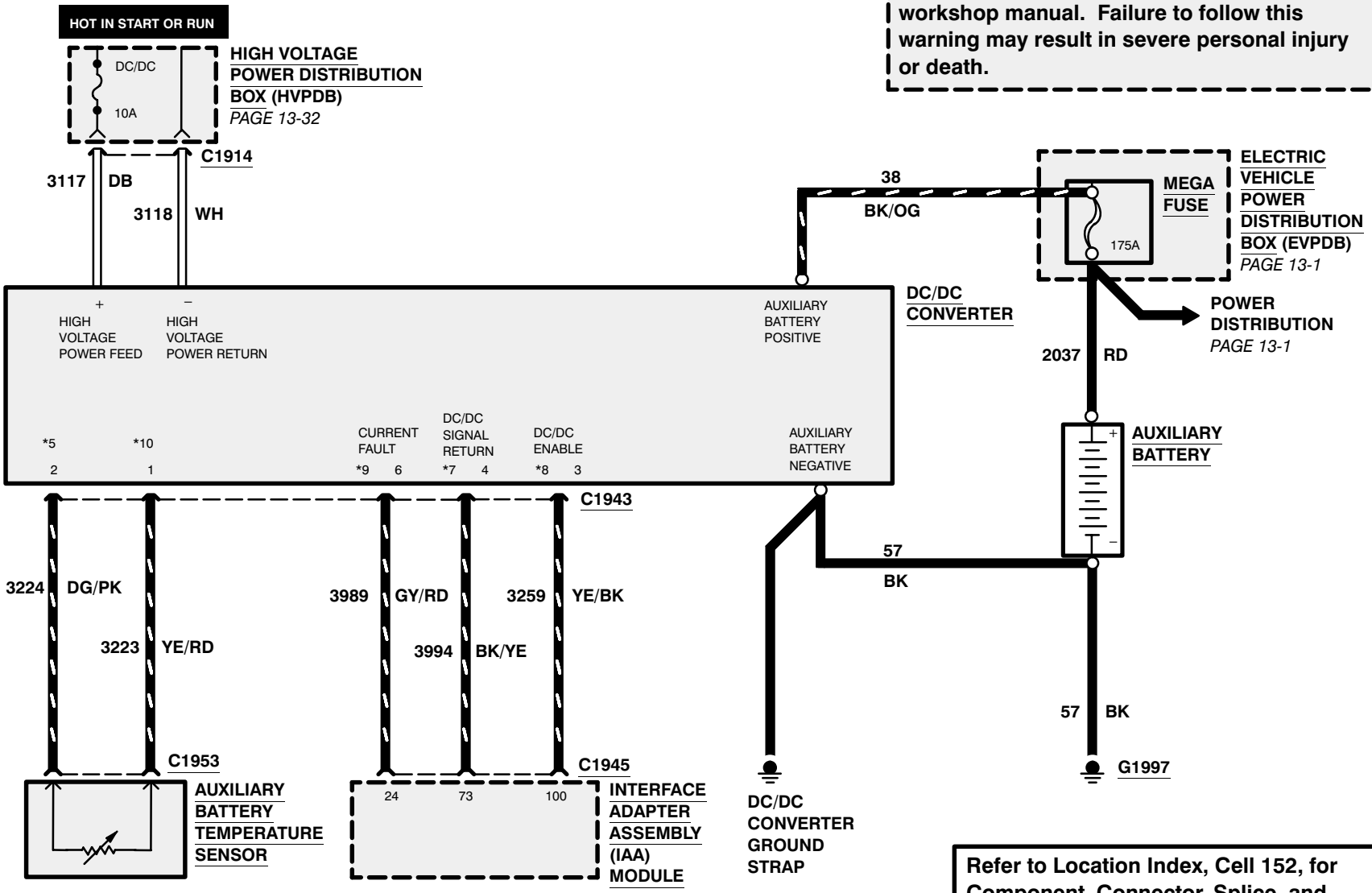
www.AUTOMOTIVEMECHANIC.org

12-1 AUXILIARY BATTERY CHARGING SYSTEM

For diagnostic information, refer to Section 414-02 of the Workshop Manual.

*** POSTAL ELECTRIC VEHICLE**

WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.



Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

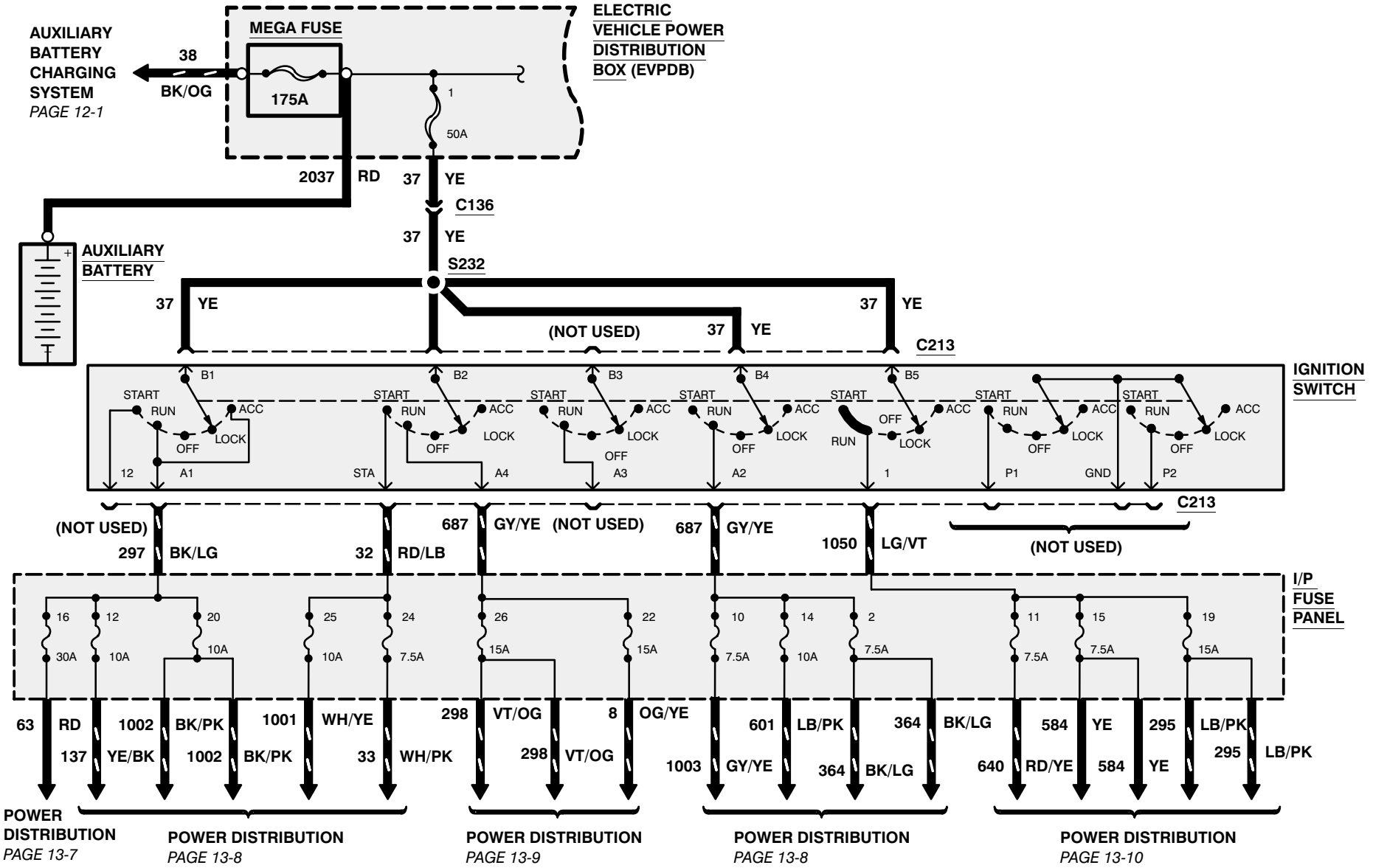
www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVEMECHANIC.org

13-1 POWER DISTRIBUTION (LOW VOLTAGE)

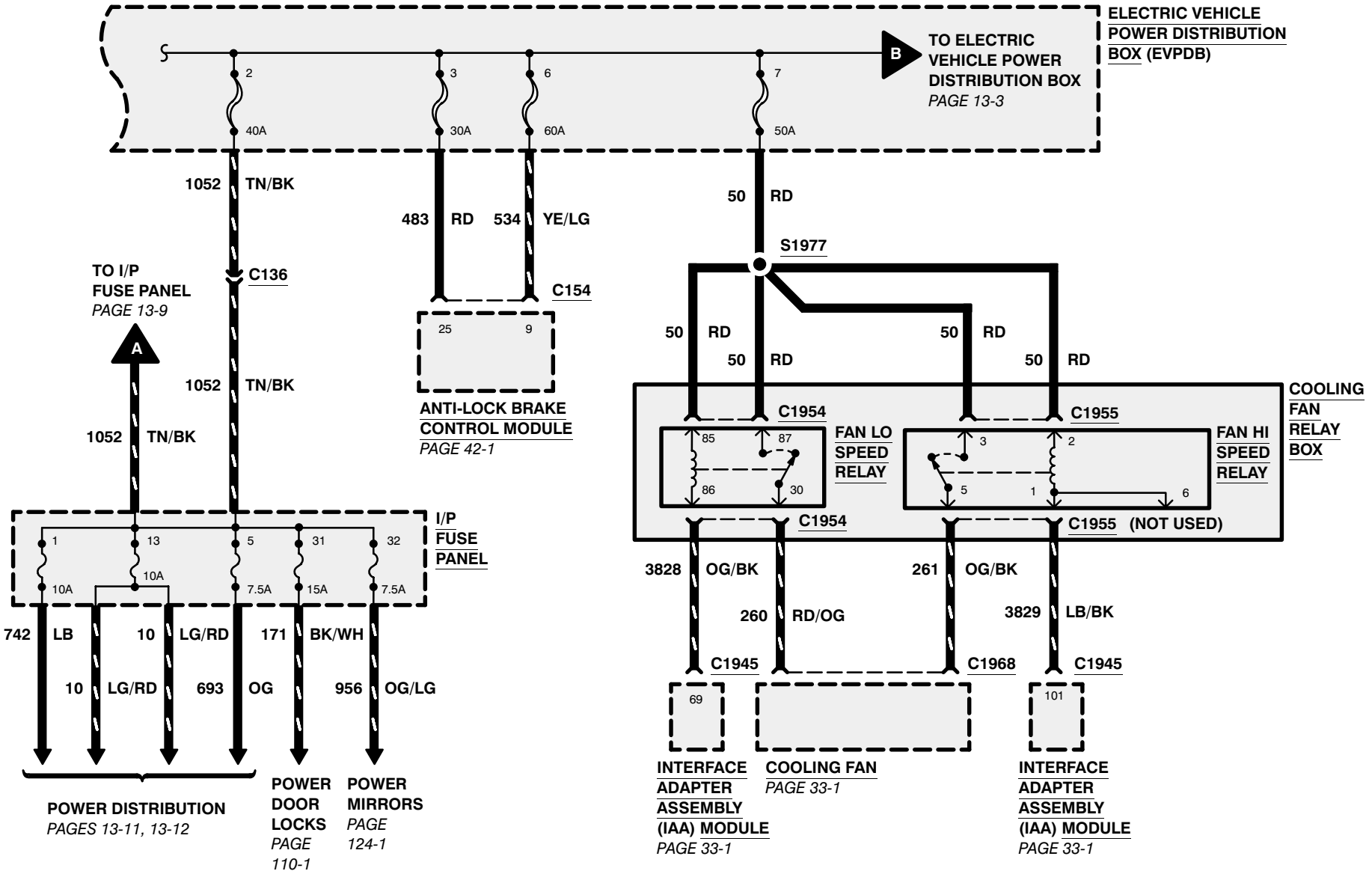
EXCEPT POSTAL

For diagnostic information, refer to Section 418-01 of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.org

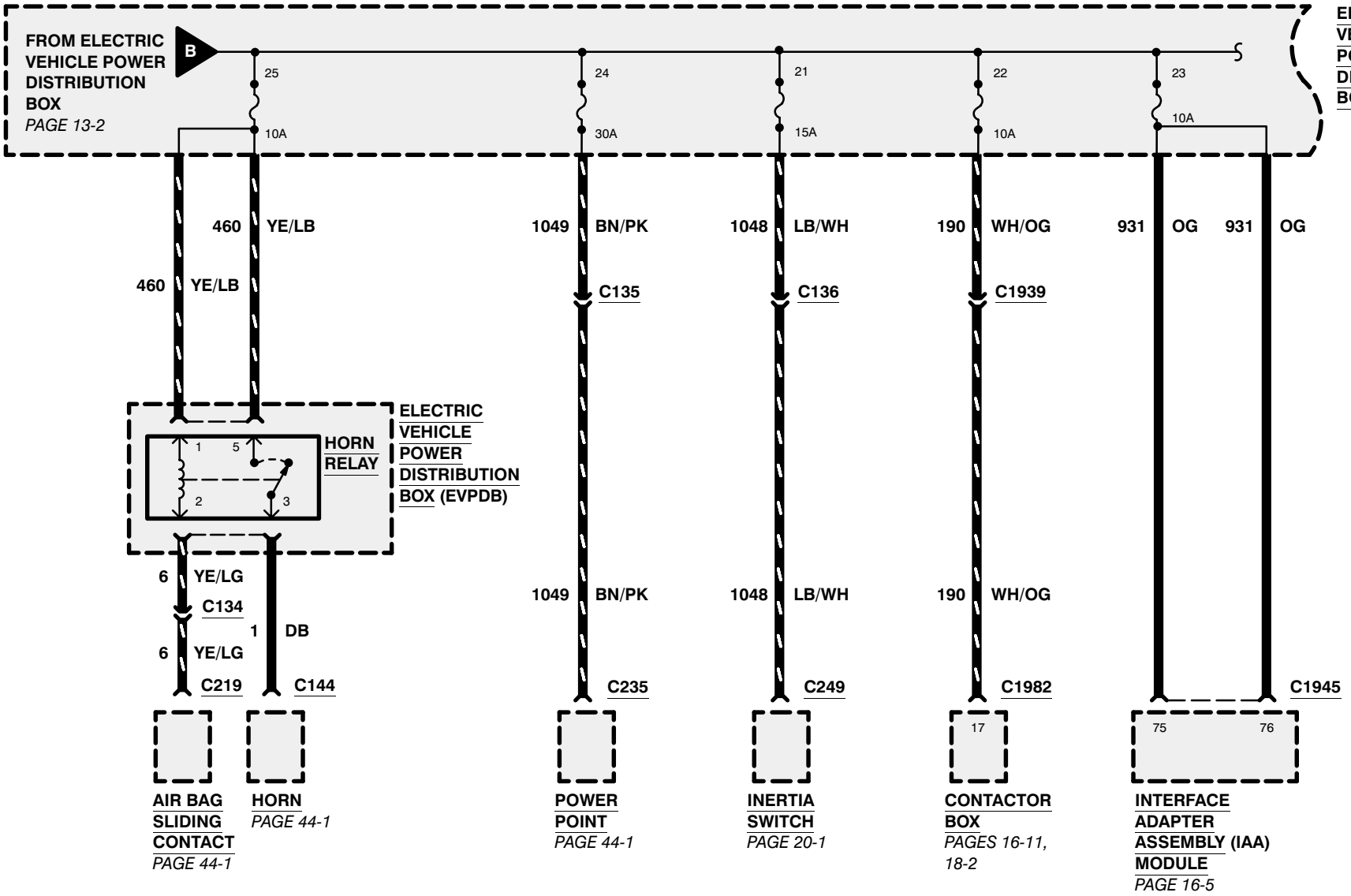
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

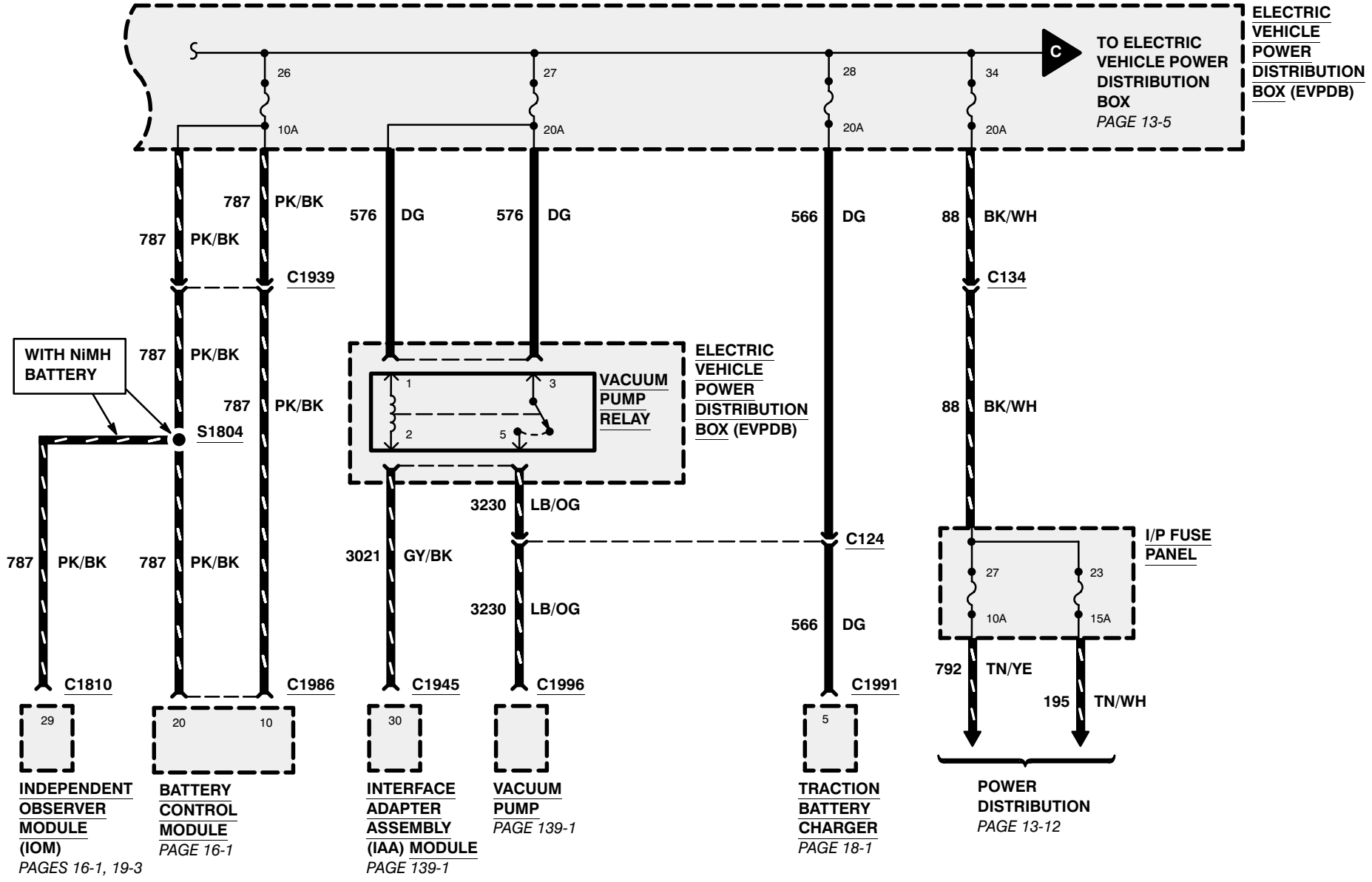
13-3 POWER DISTRIBUTION (LOW VOLTAGE)

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

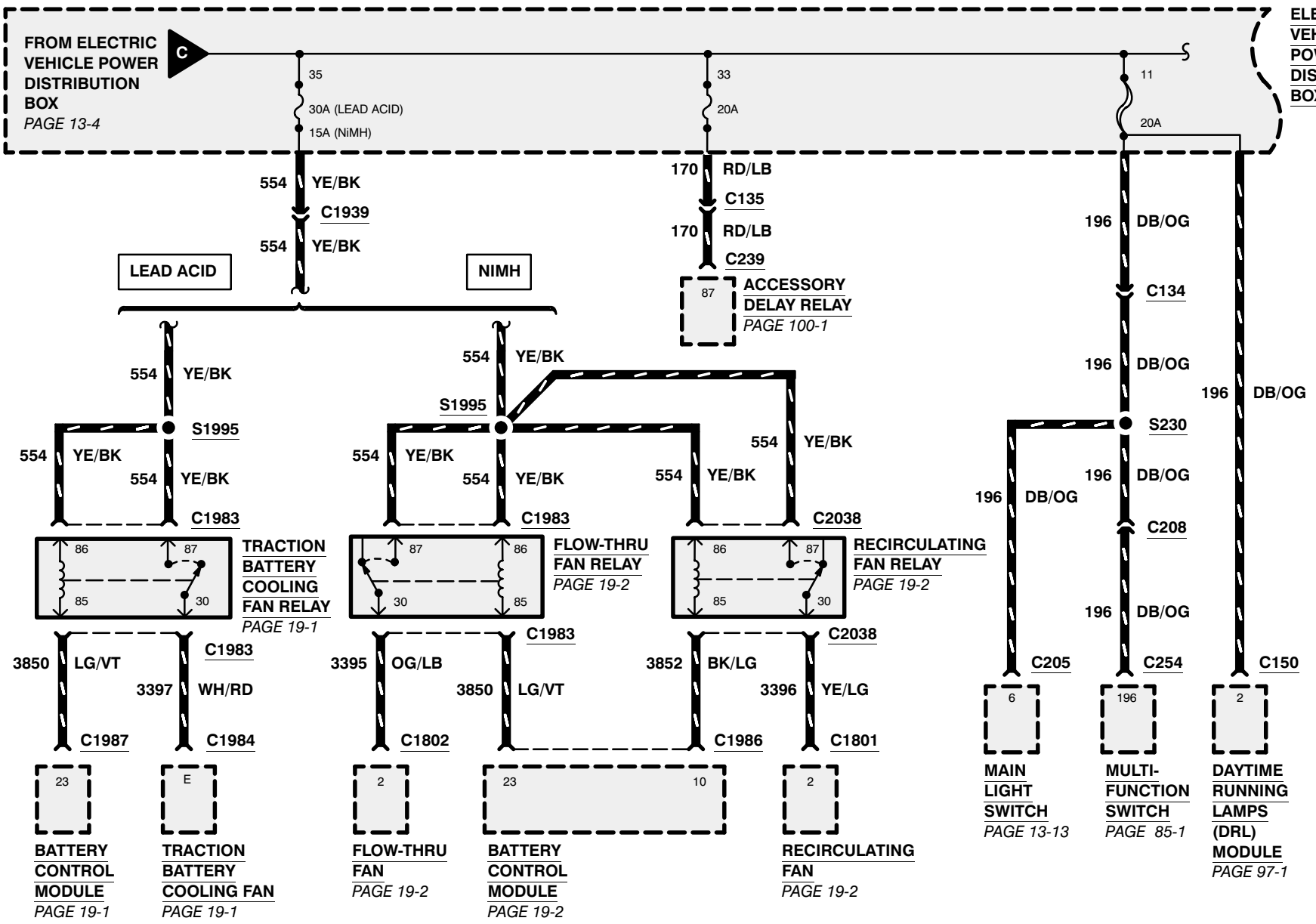
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

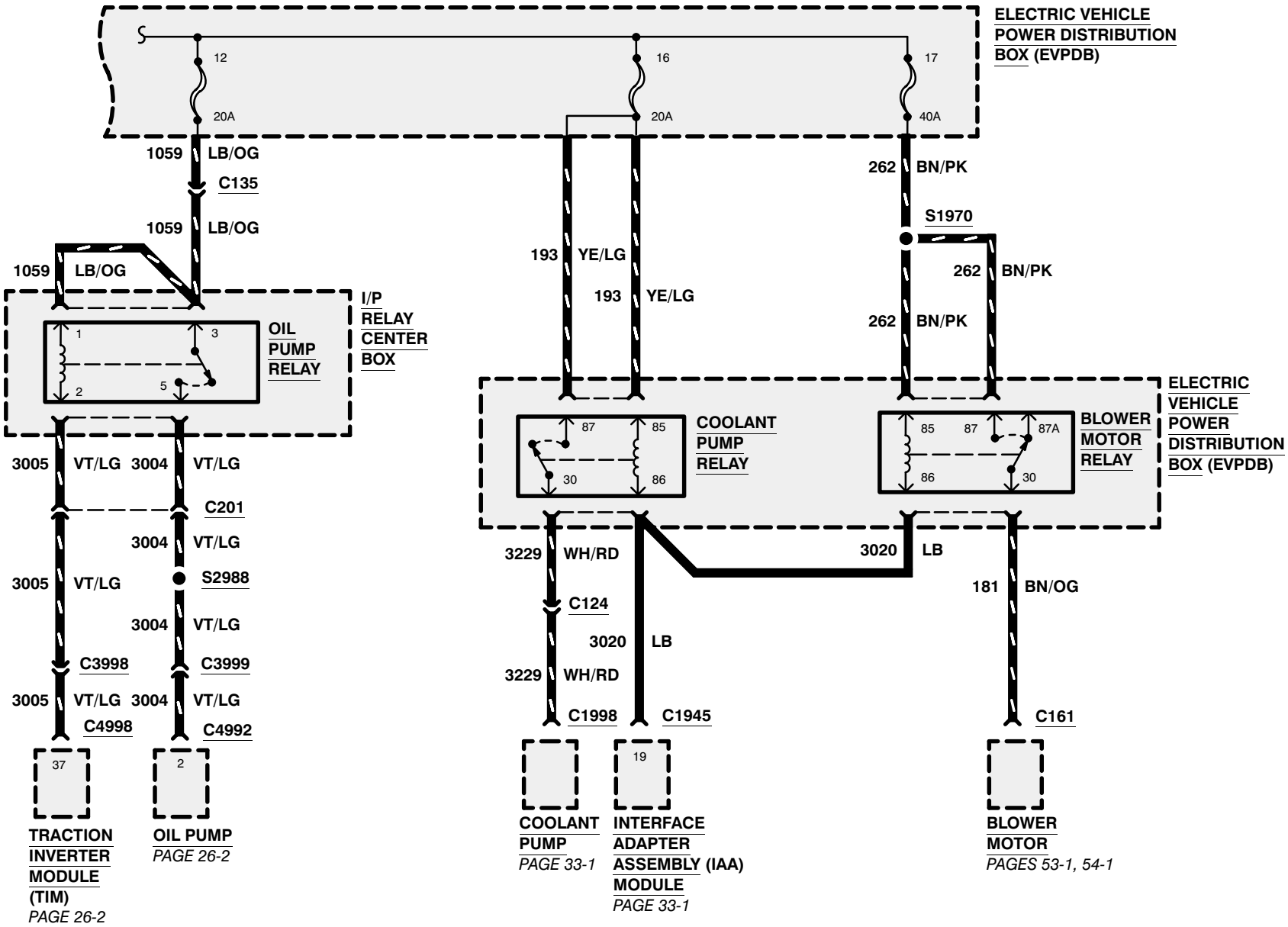
13-5 POWER DISTRIBUTION (LOW VOLTAGE)

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

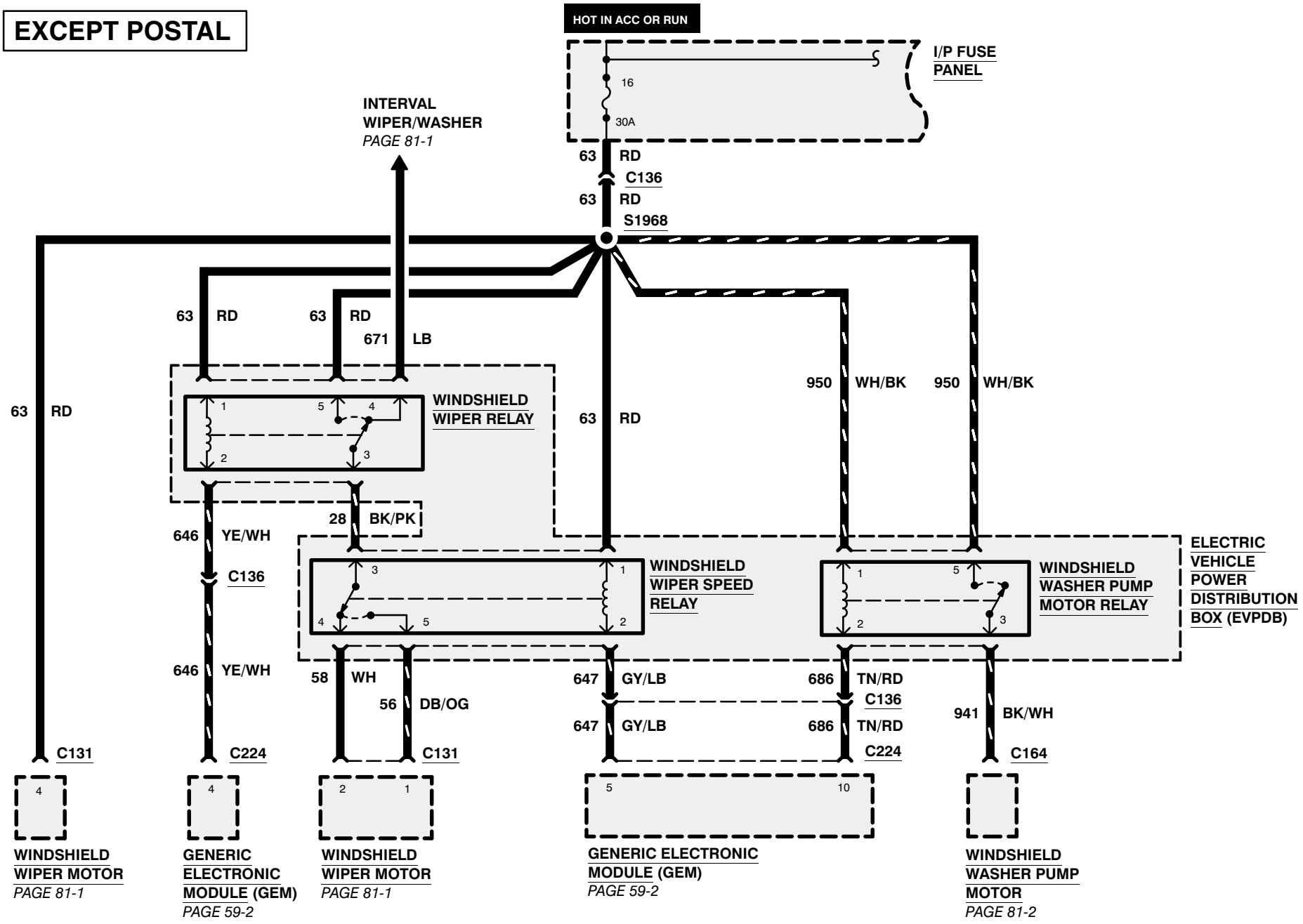
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

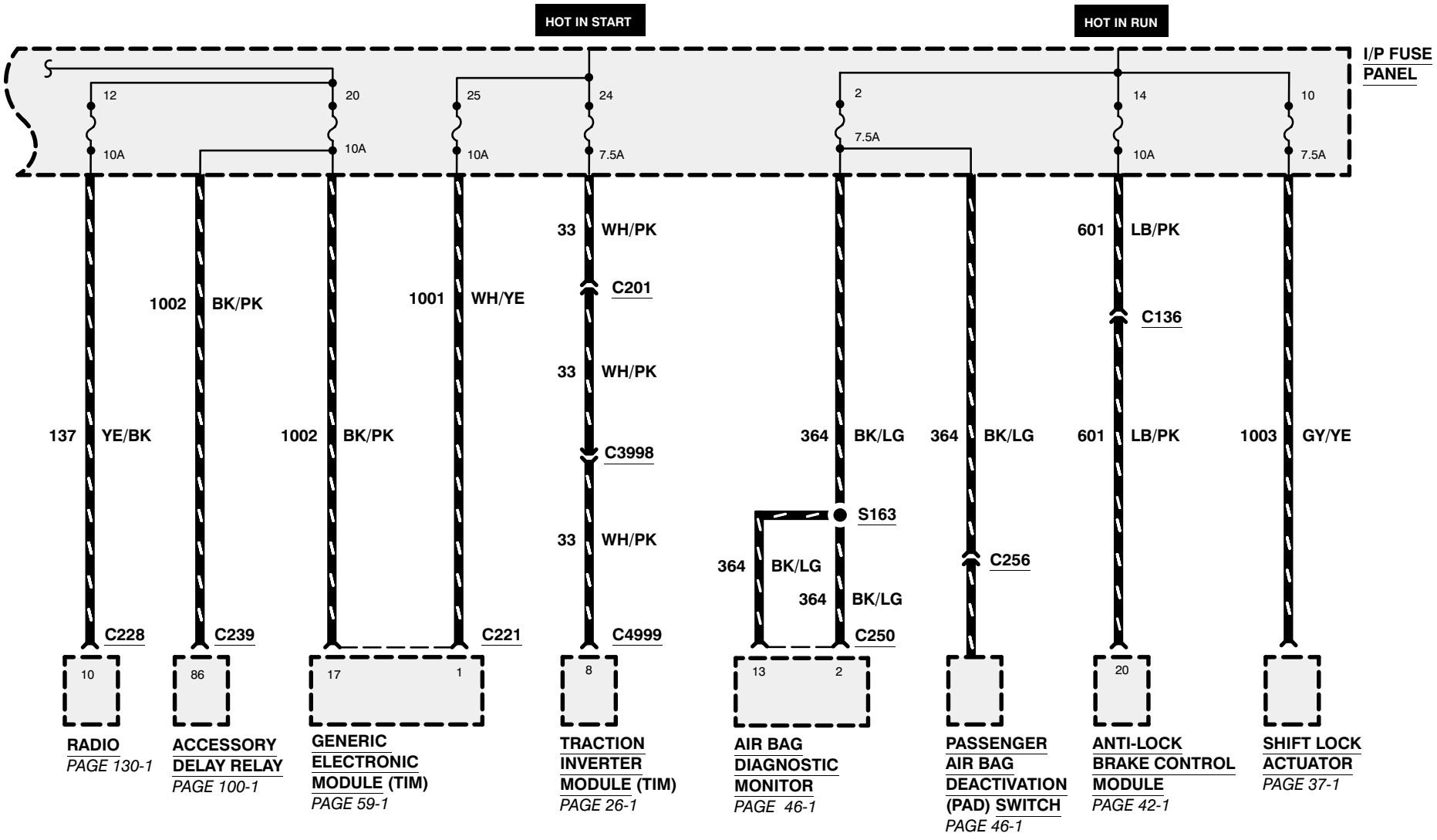
13-7 POWER DISTRIBUTION (LOW VOLTAGE)

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

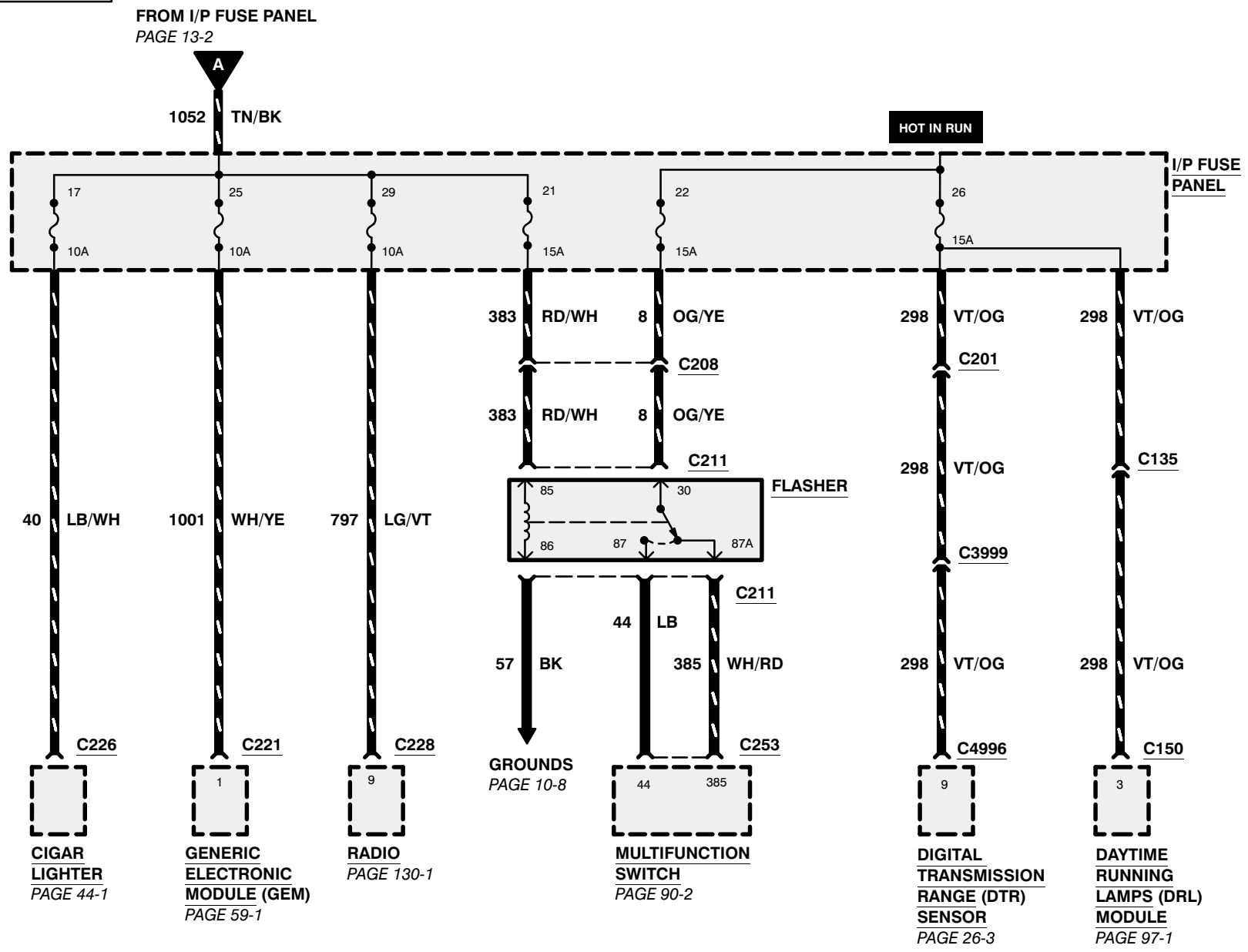
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

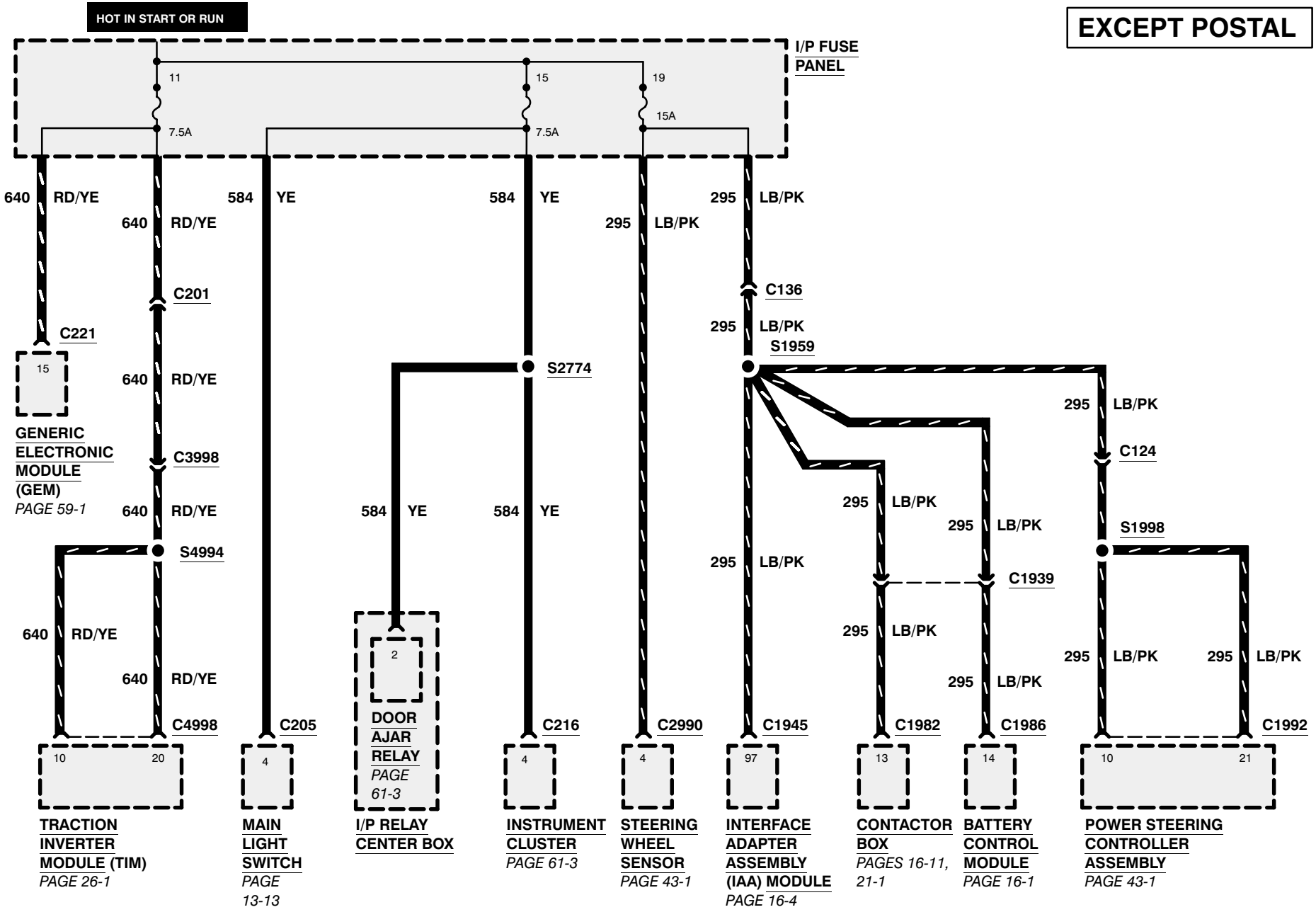
13-9 POWER DISTRIBUTION (LOW VOLTAGE)

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

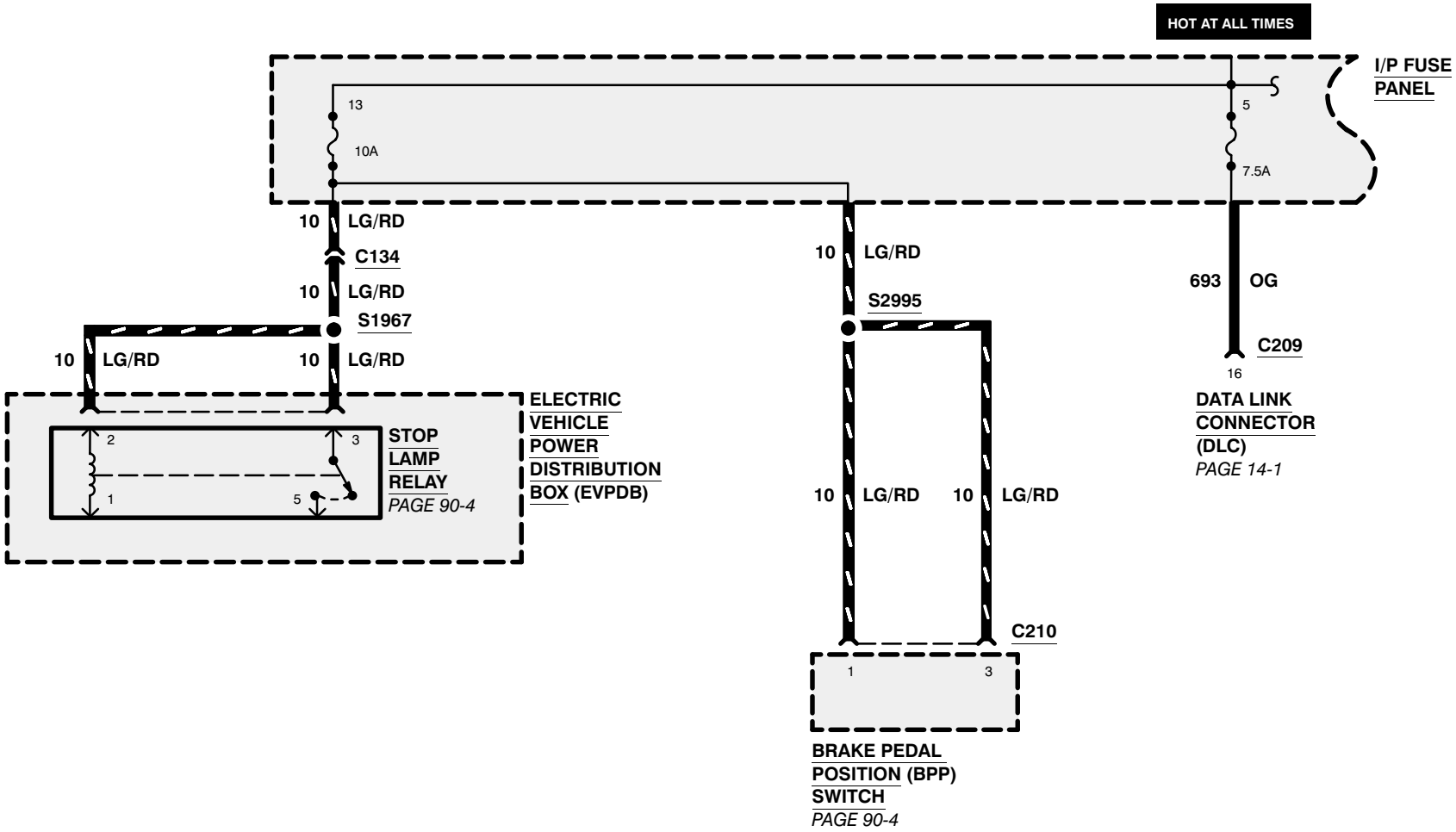
POWER DISTRIBUTION (LOW VOLTAGE) 13-10



www.AUTOMOTIVEMECHANIC.ORG

13-11 POWER DISTRIBUTION (LOW VOLTAGE)

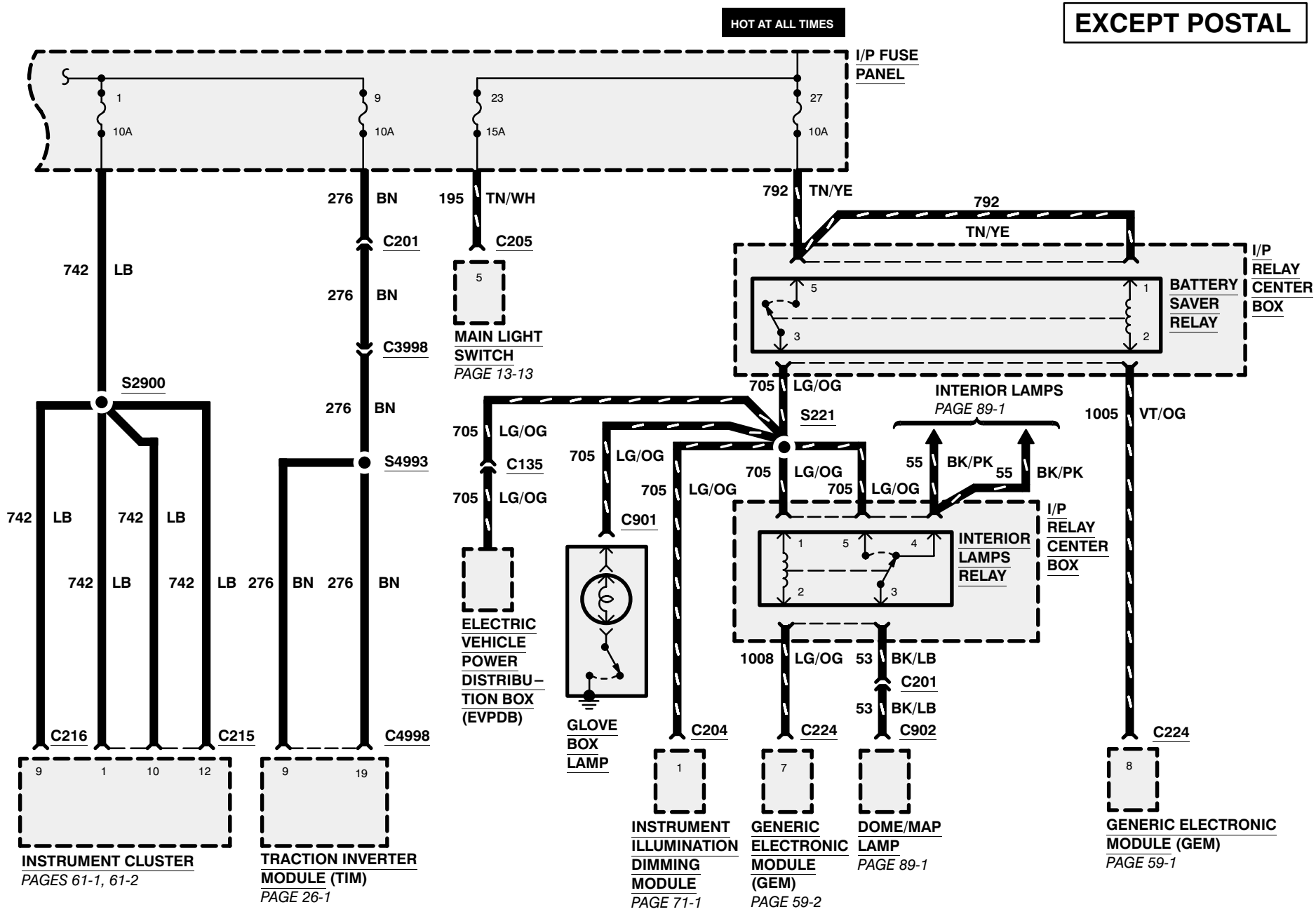
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

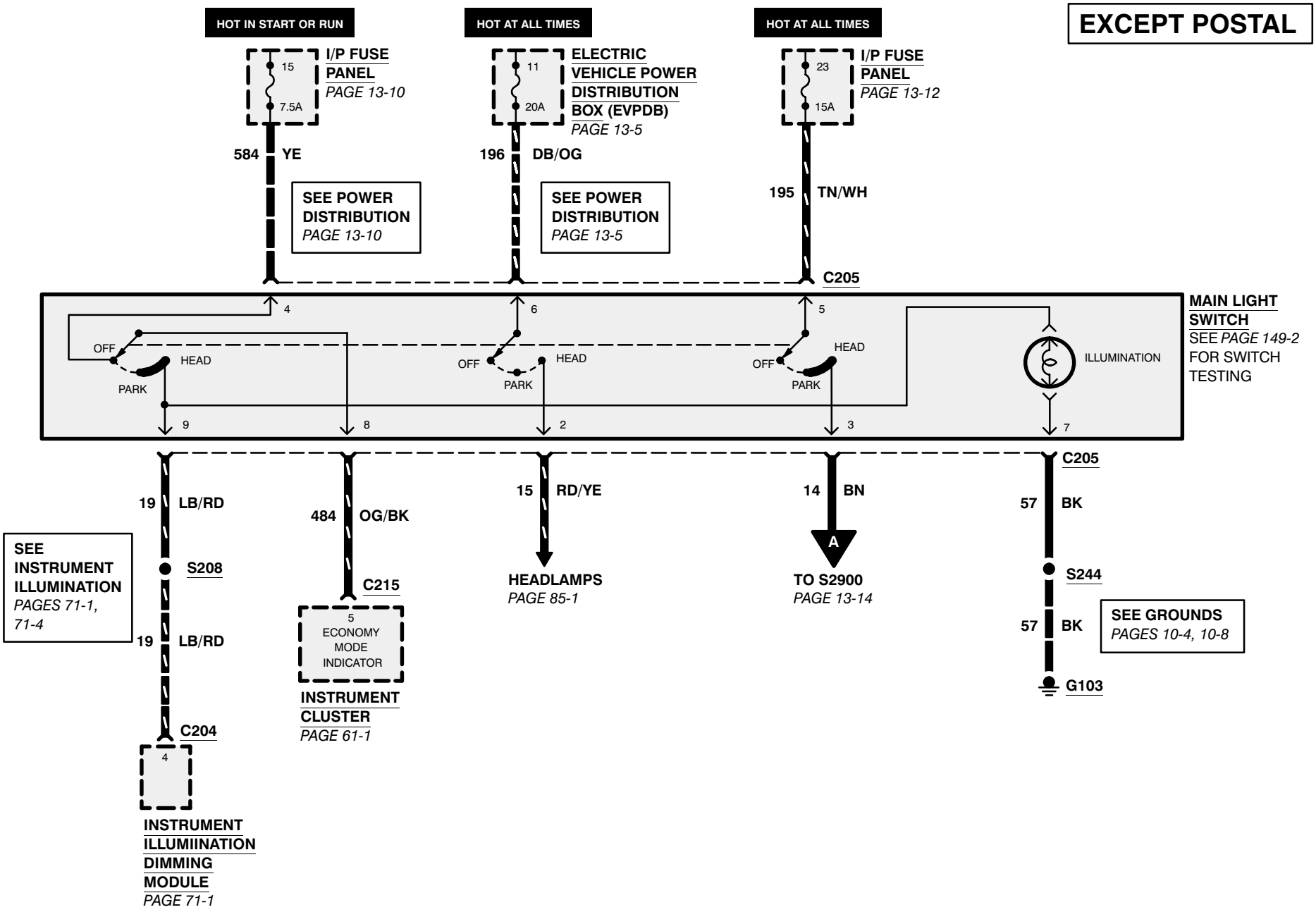
POWER DISTRIBUTION (LOW VOLTAGE) 13-12

EXCEPT POSTAL



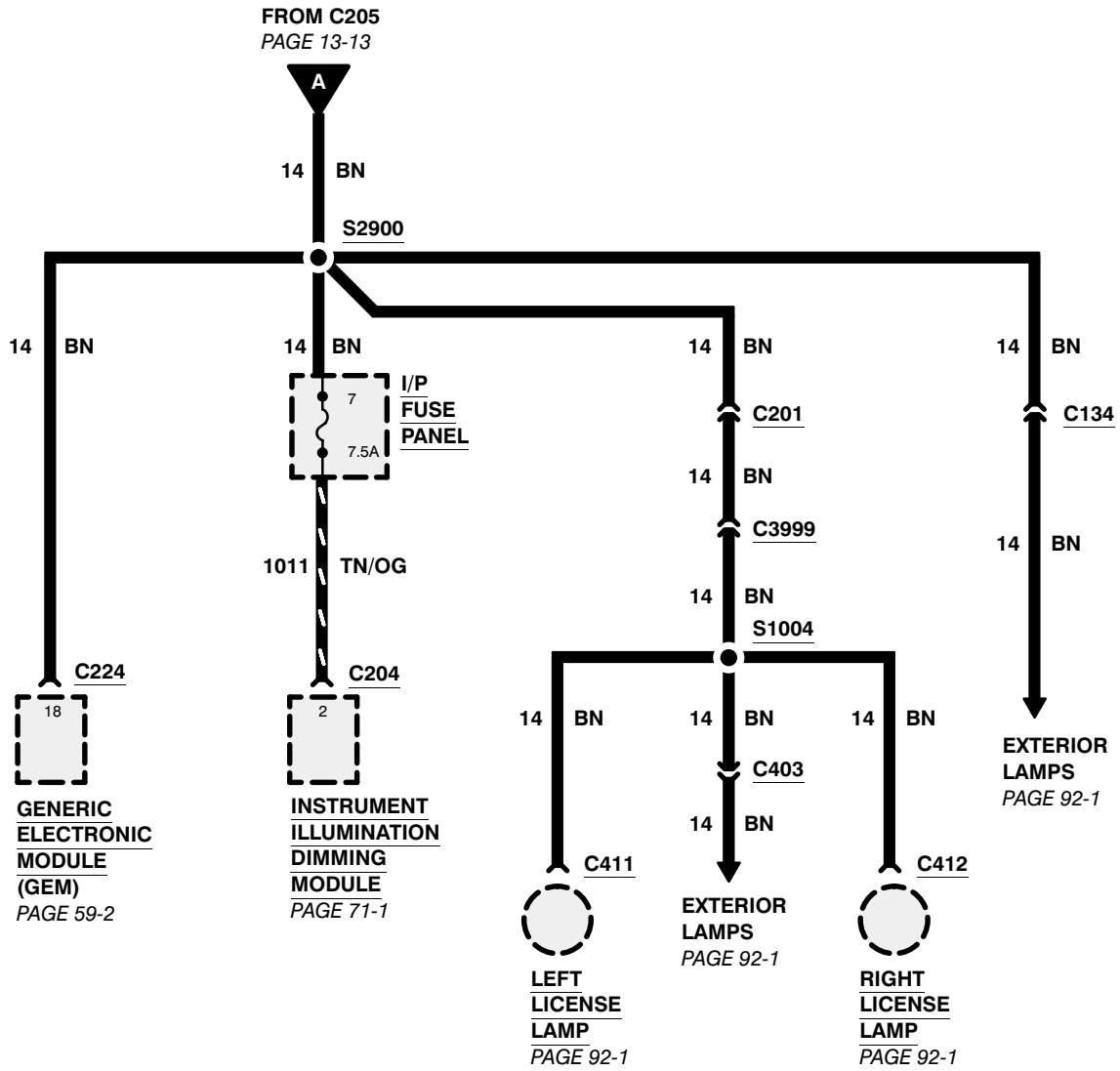
www.AUTOMOTIVEMECHANIC.ORG

13-13 POWER DISTRIBUTION (LOW VOLTAGE)



www.AUTOMOTIVEMECHANIC.org

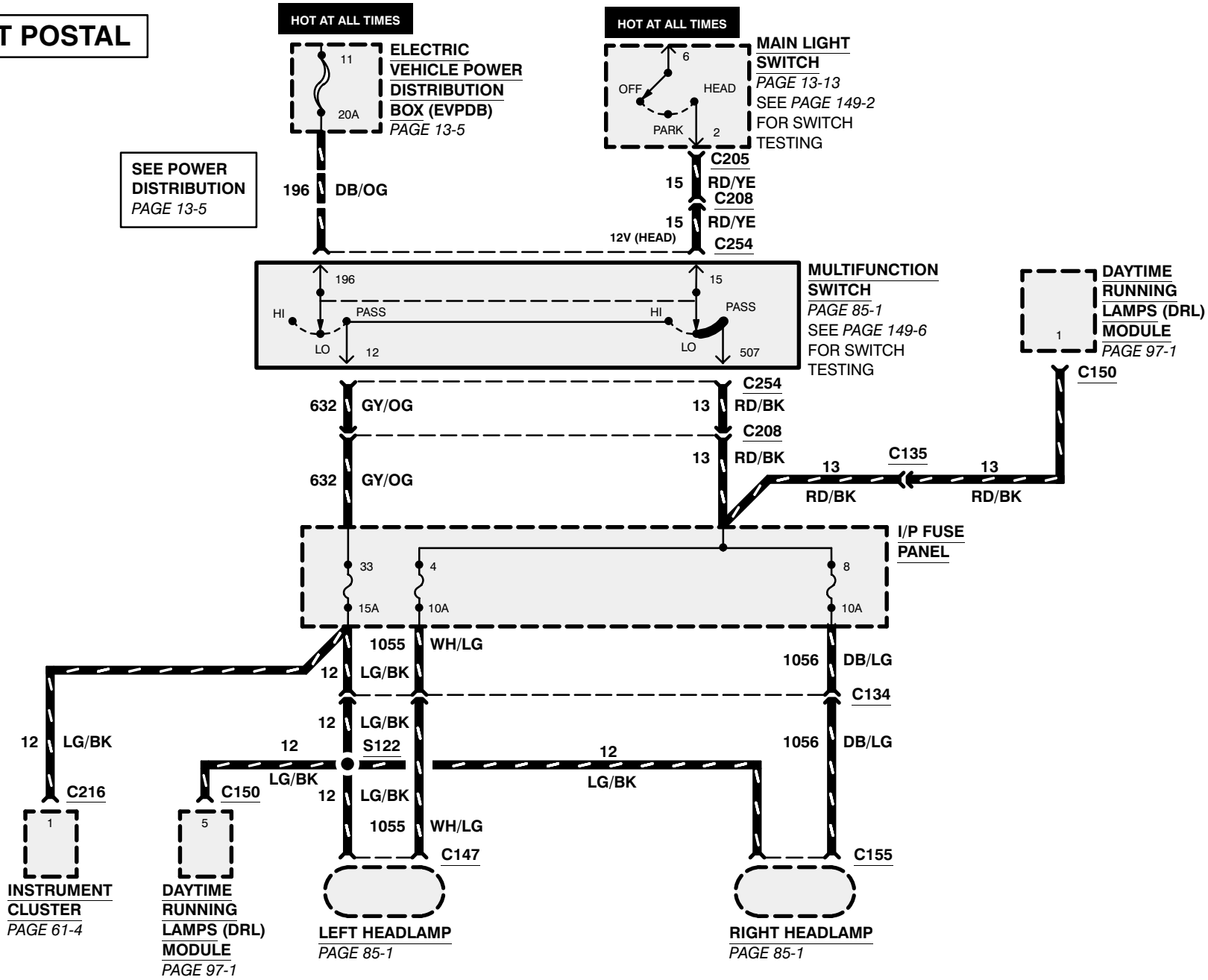
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

13-15 POWER DISTRIBUTION (LOW VOLTAGE)

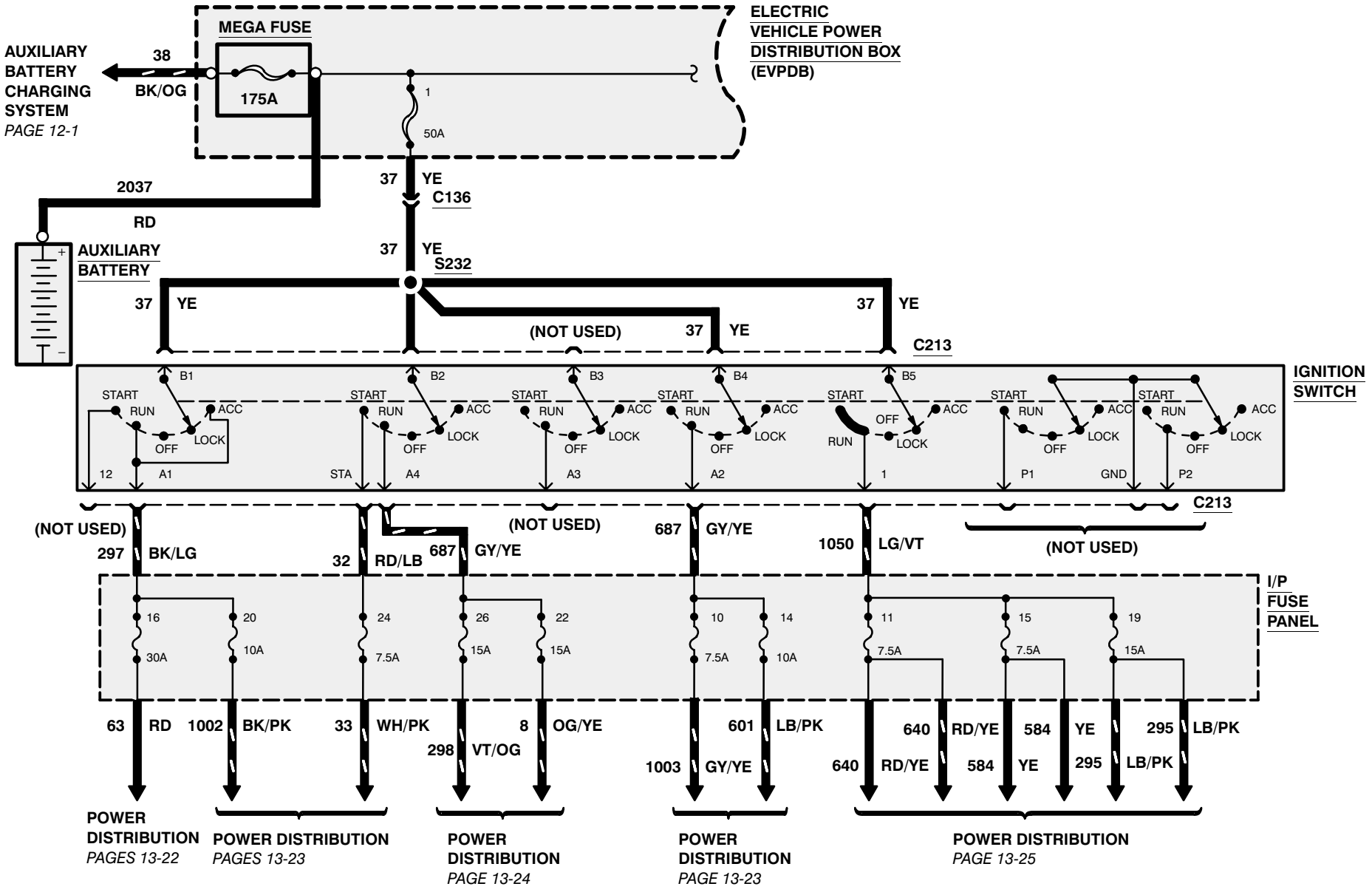
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

POSTAL

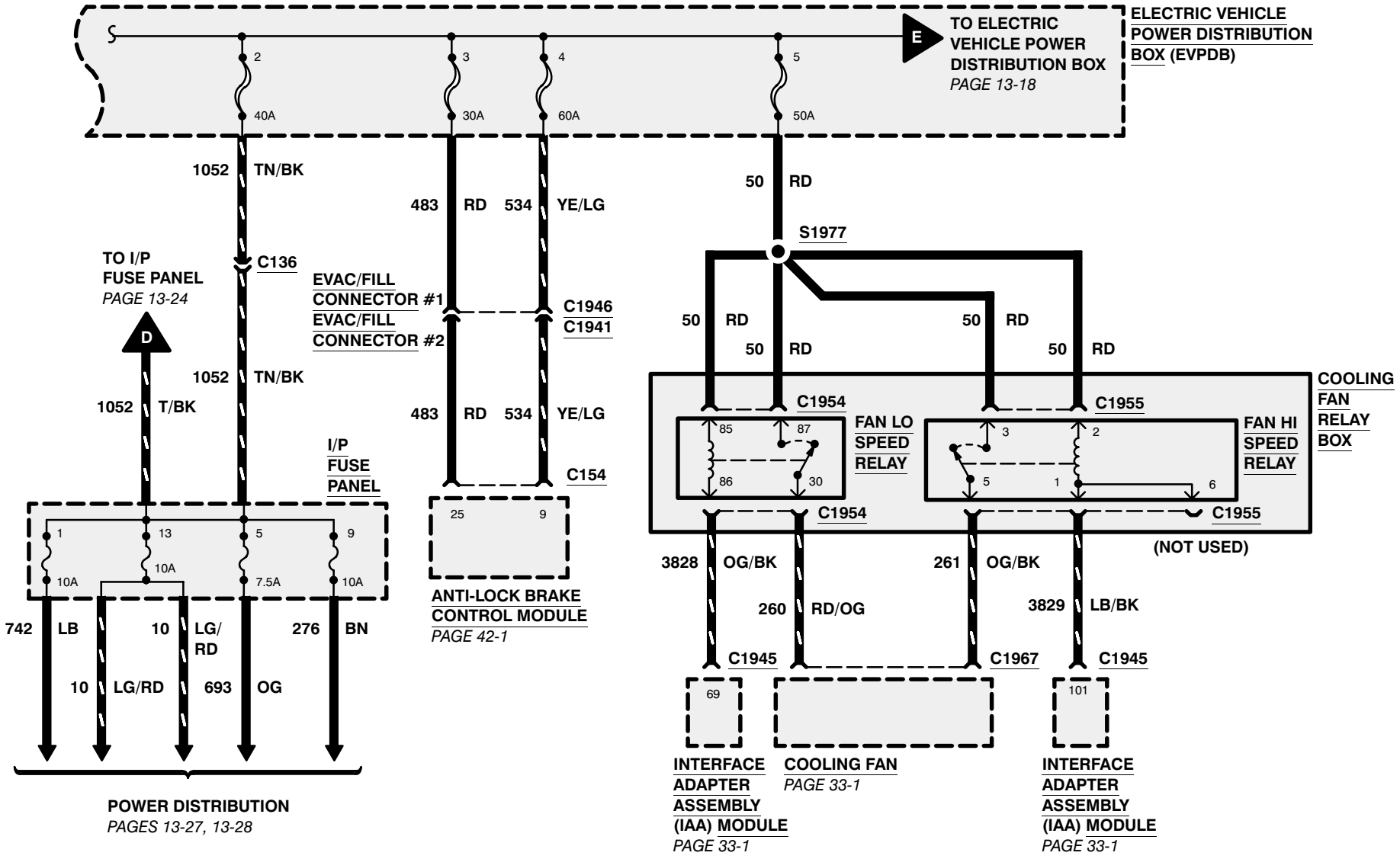
For diagnostic information, refer to Section 418-01 of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.org

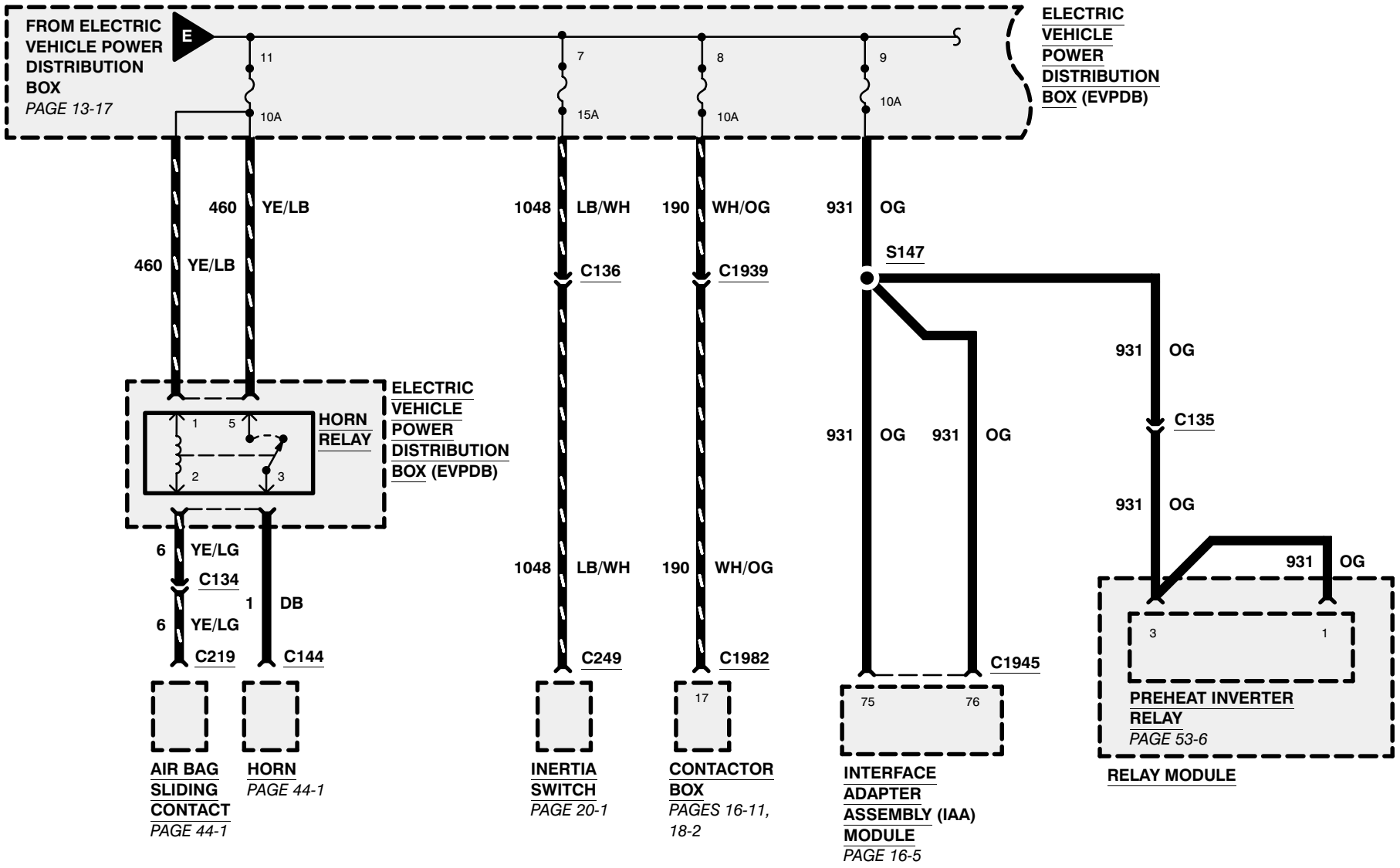
13-17 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.ORG

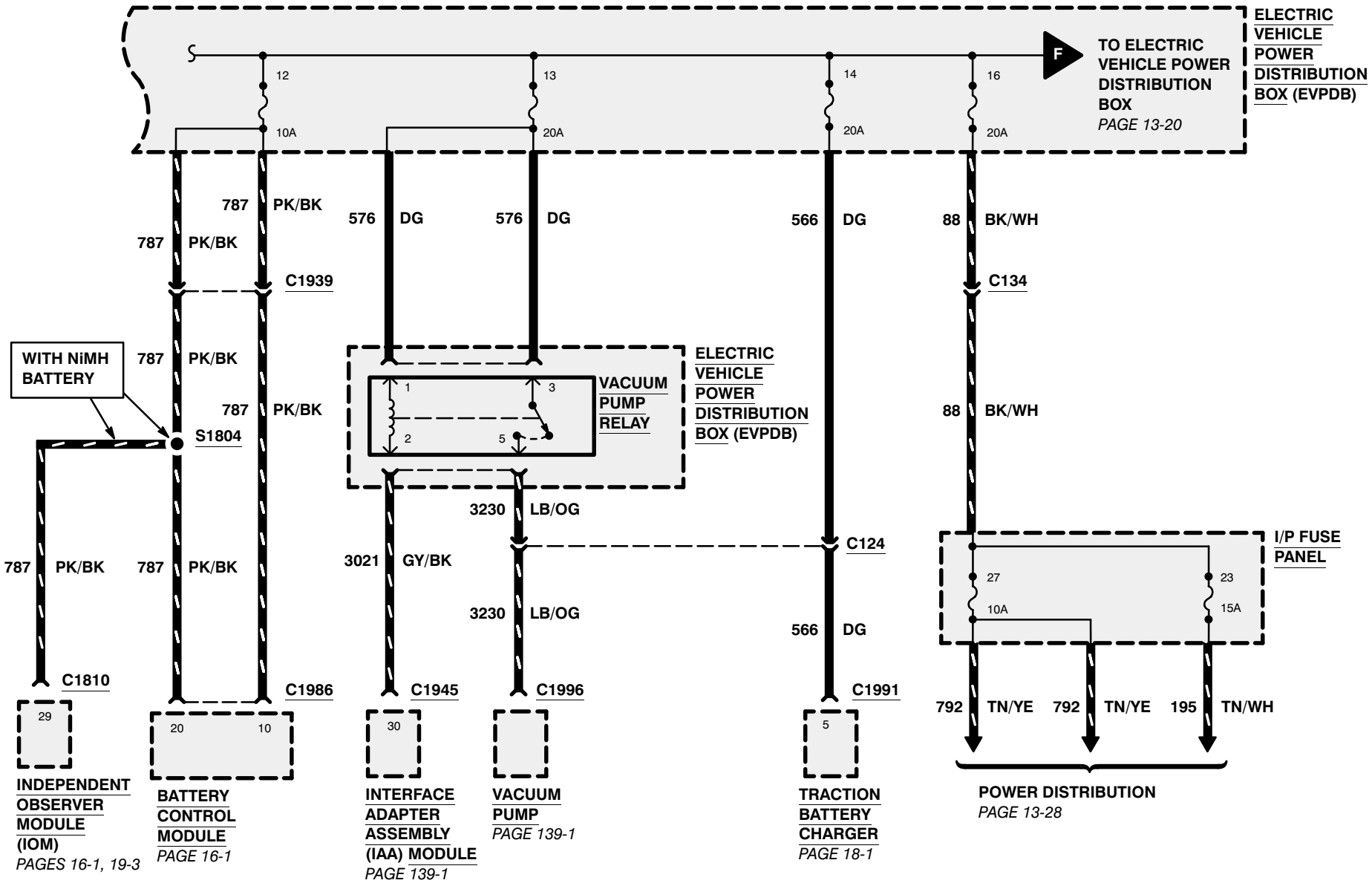
POSTAL



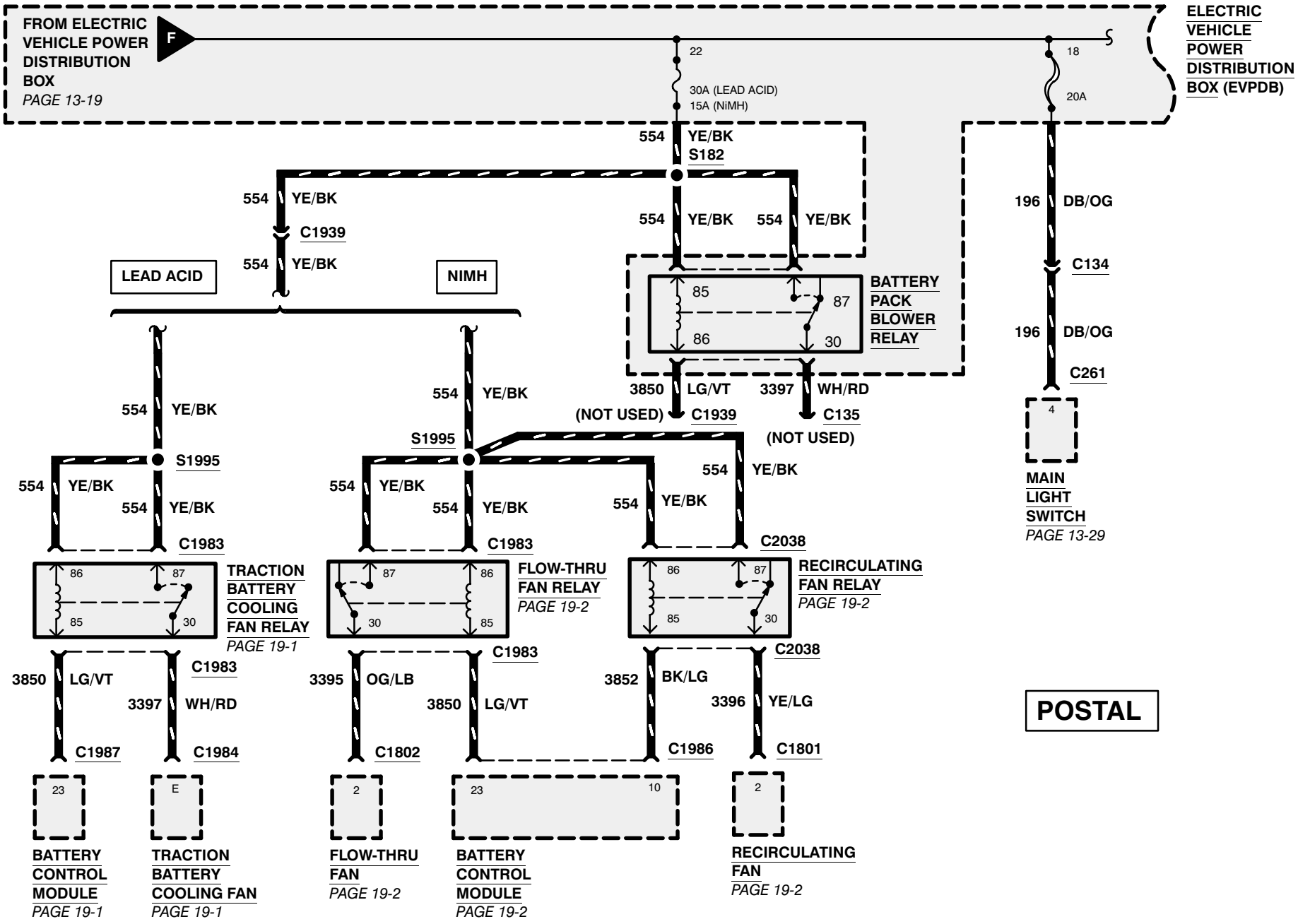
www.AUTOMOTIVEMECHANIC.org

13-19 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



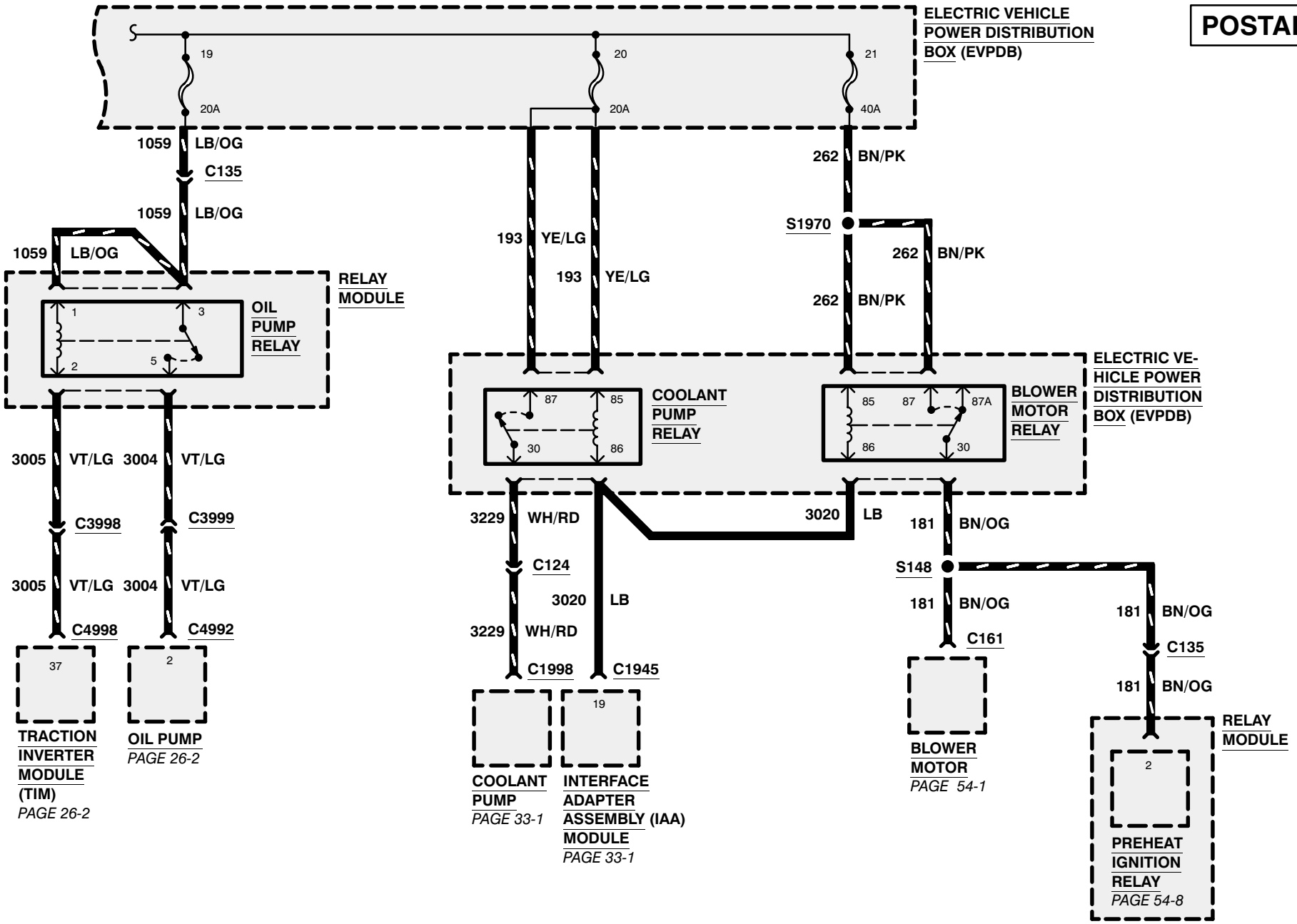
www.AUTOMOTIVEMECHANIC.org



www.AUTOMOTIVEMECHANIC.org

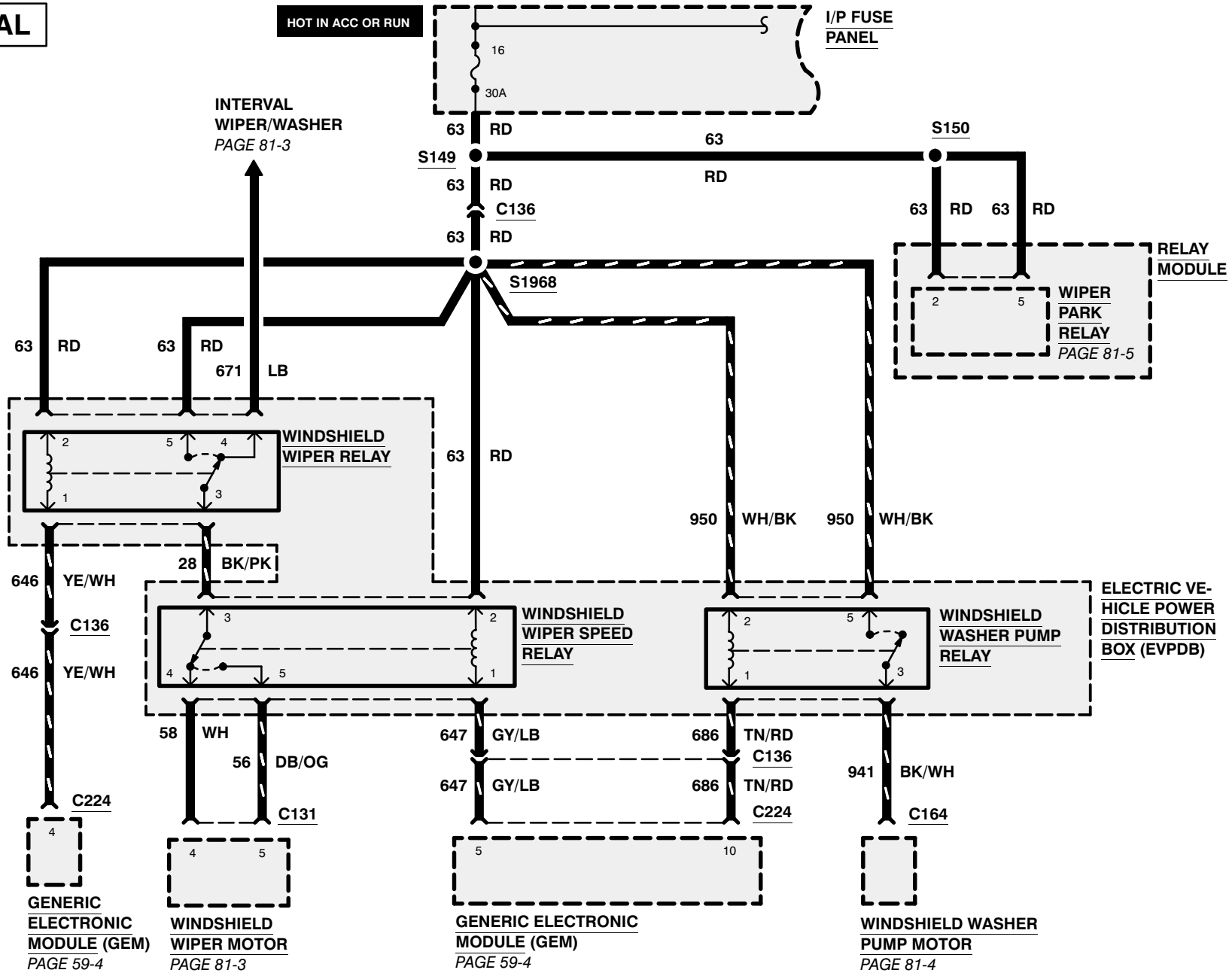
13-21 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.ORG

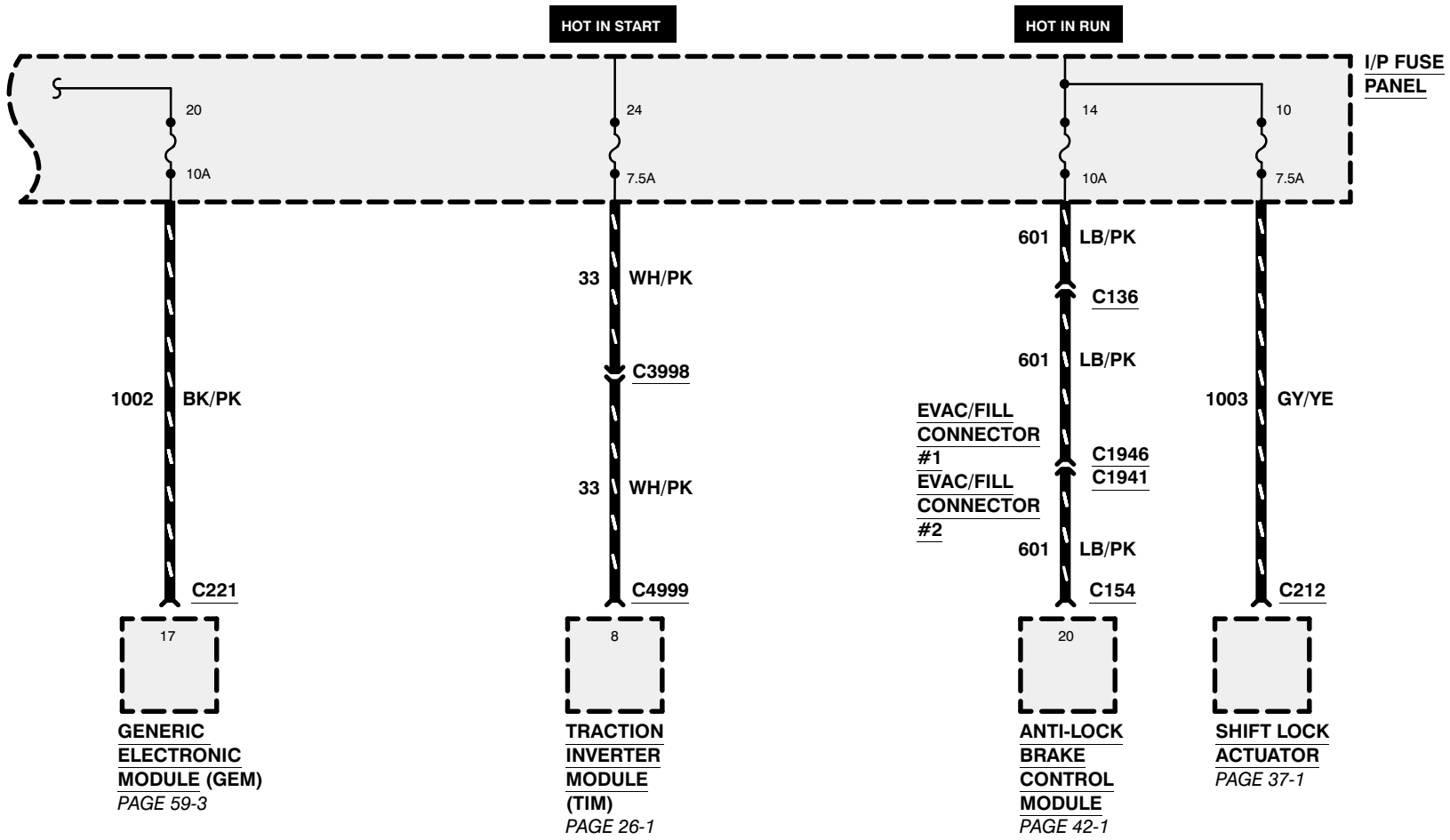
POSTAL



www.AUTOMOTIVEMECHANIC.org

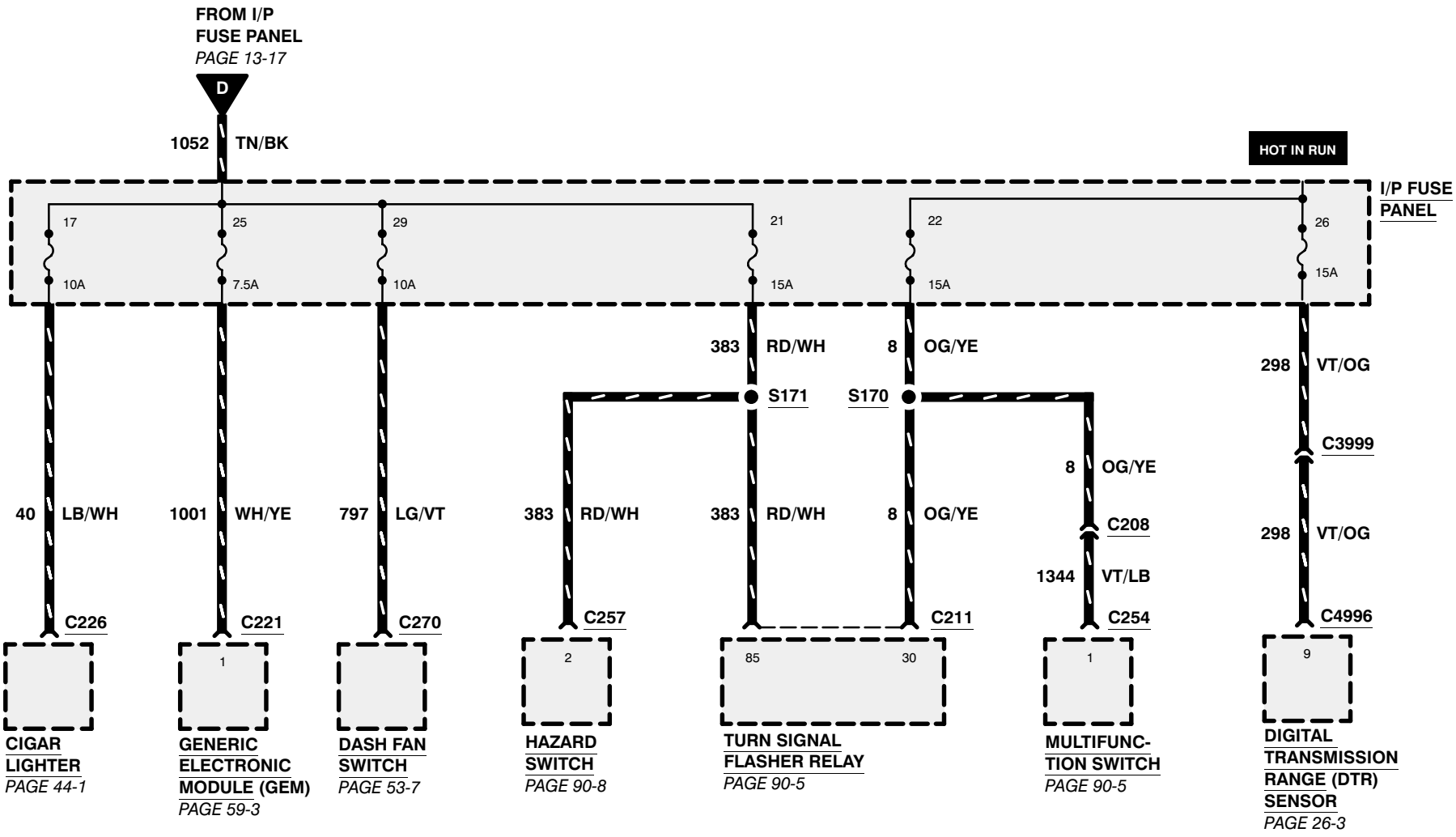
13-23 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.org

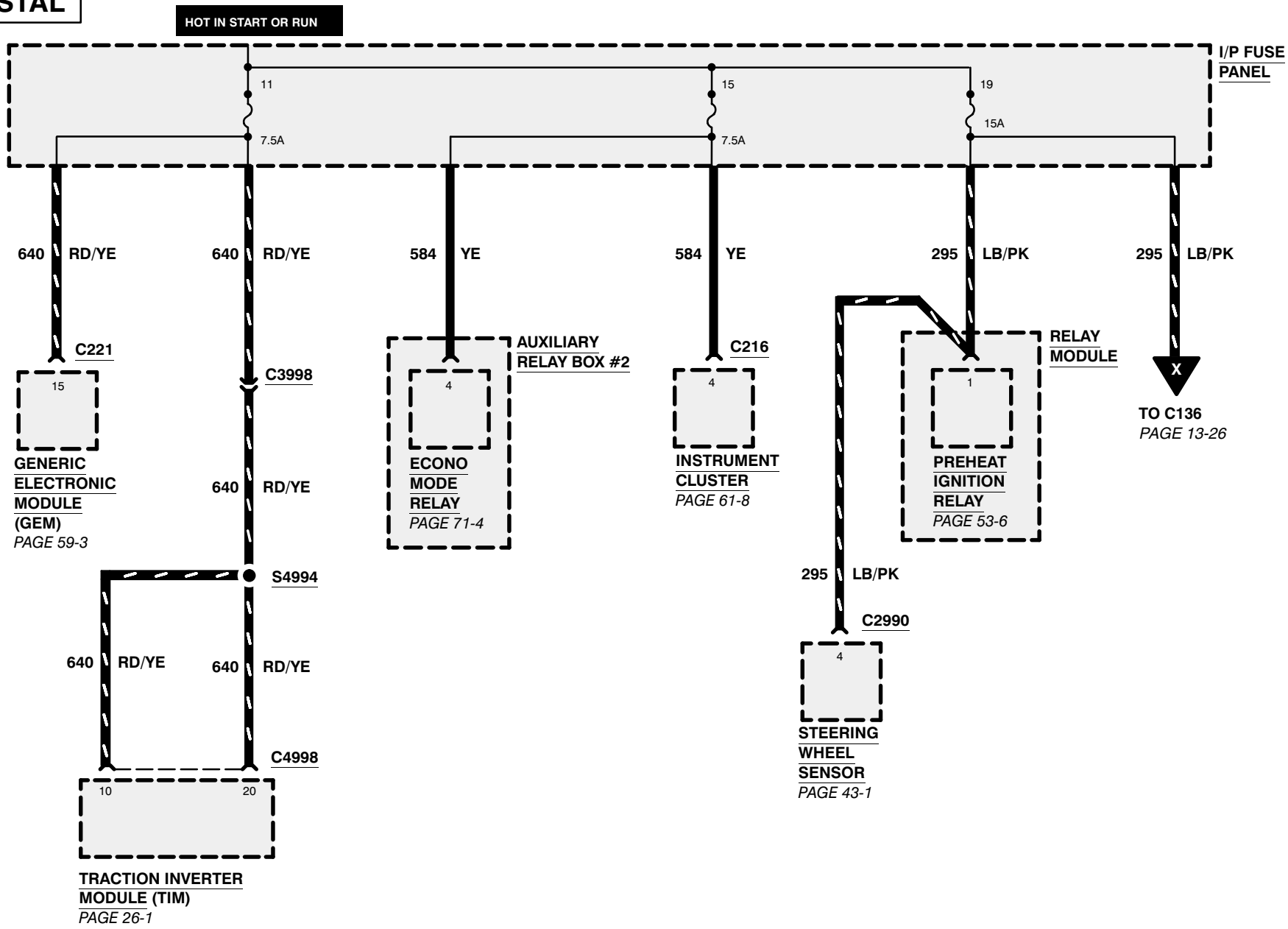
POSTAL



www.AUTOMOTIVEMECHANIC.ORG

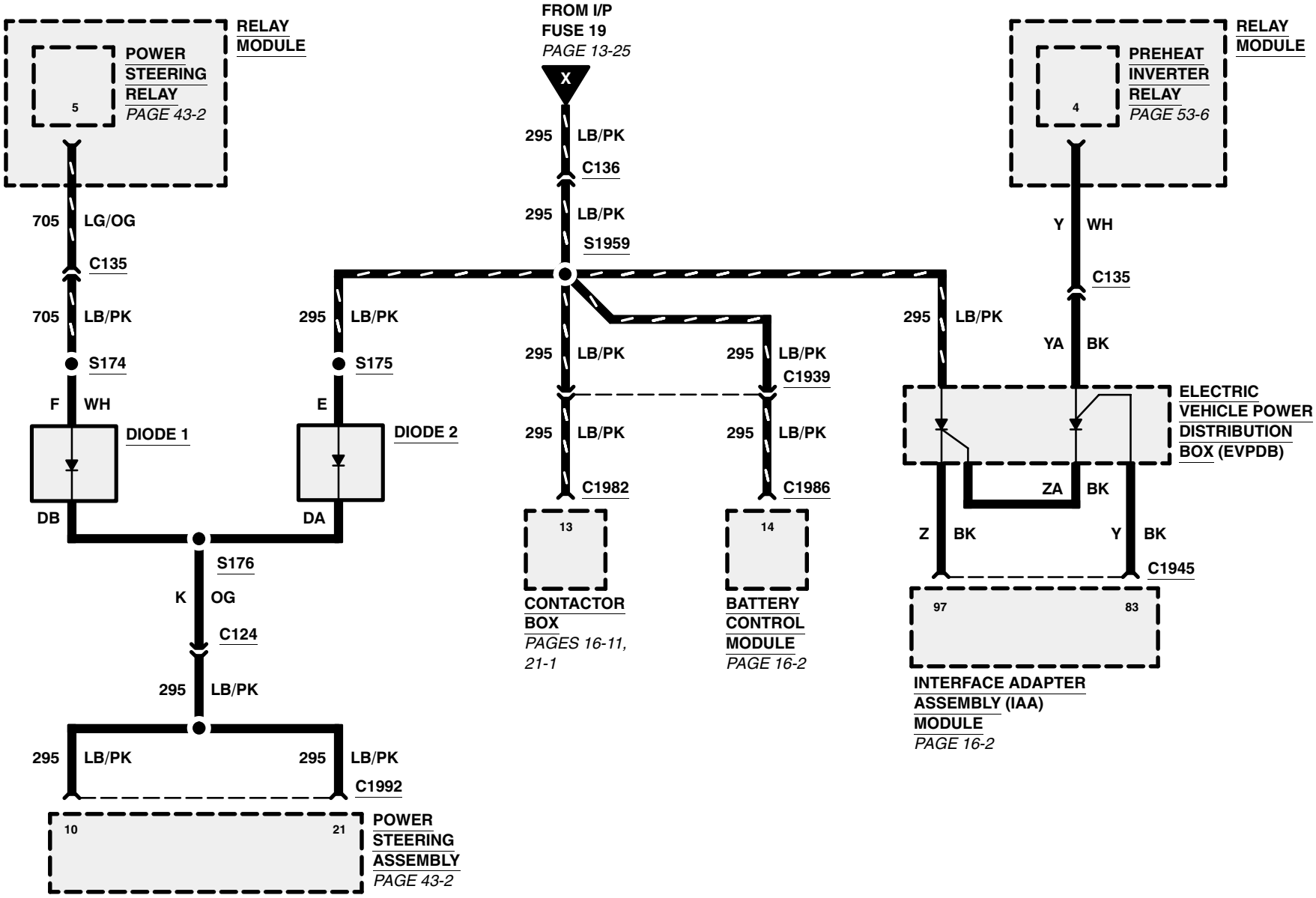
13-25 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.org

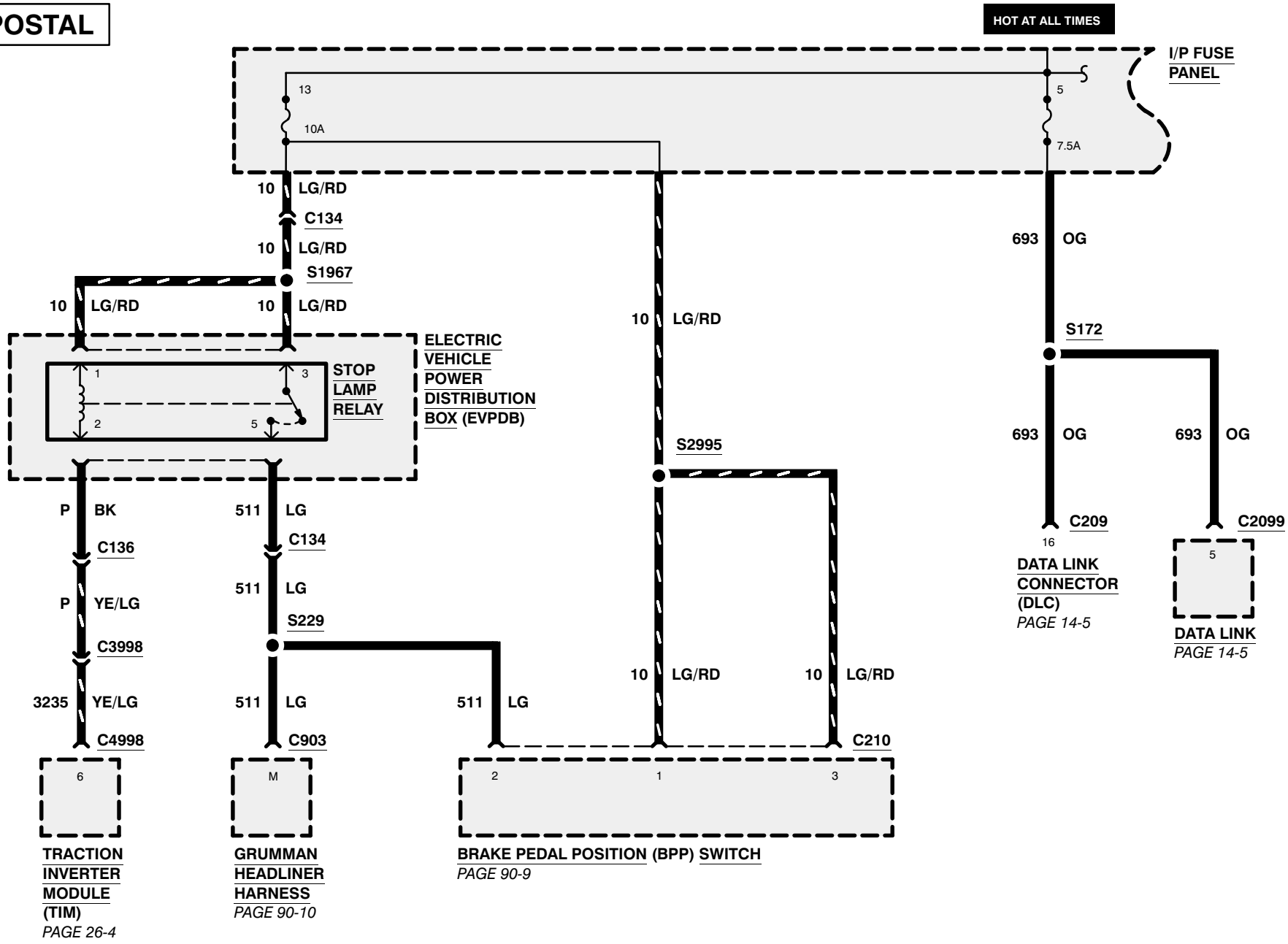
POSTAL



www.AUTOMOTIVEMECHANIC.org

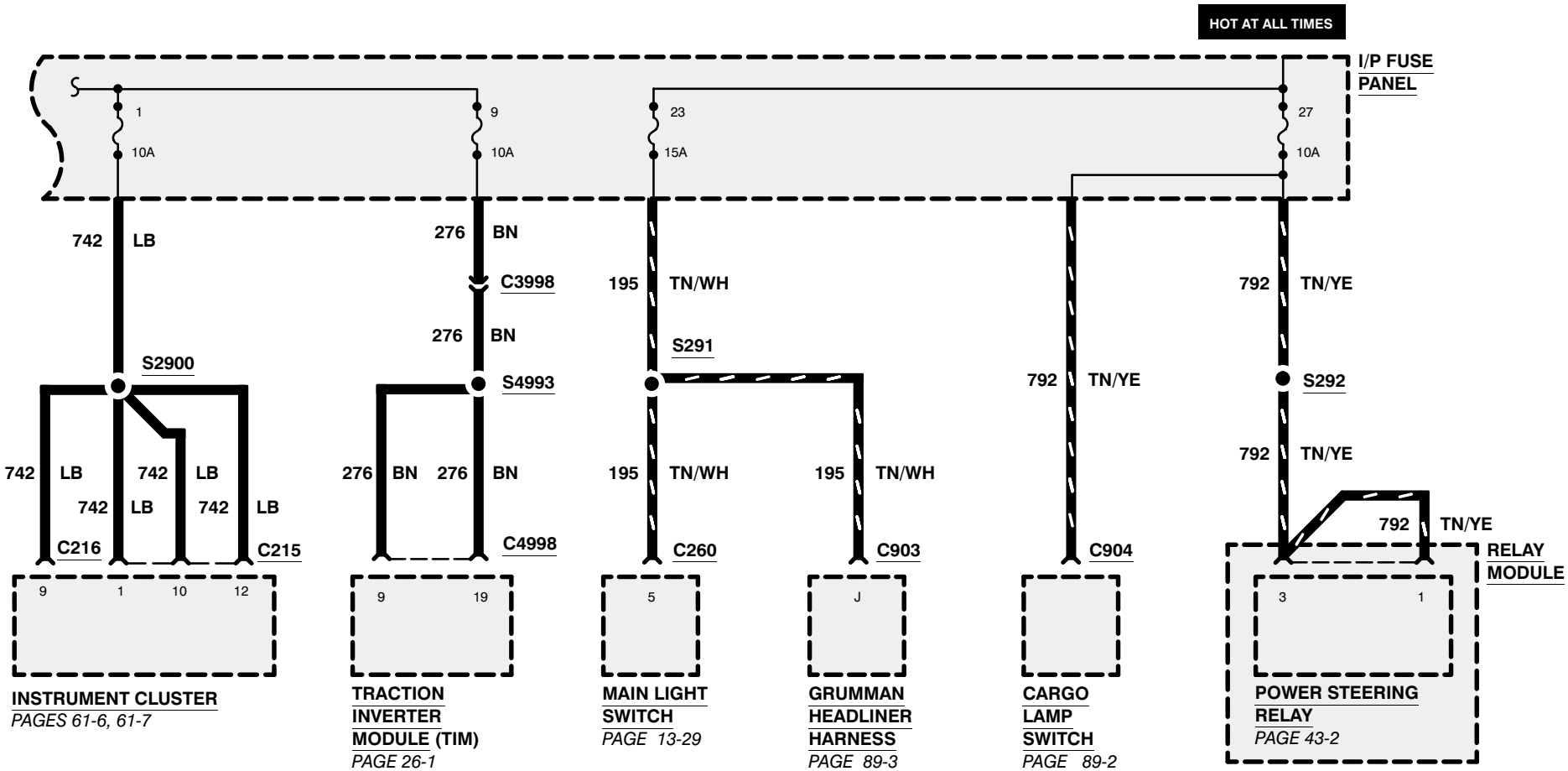
13-27 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.org

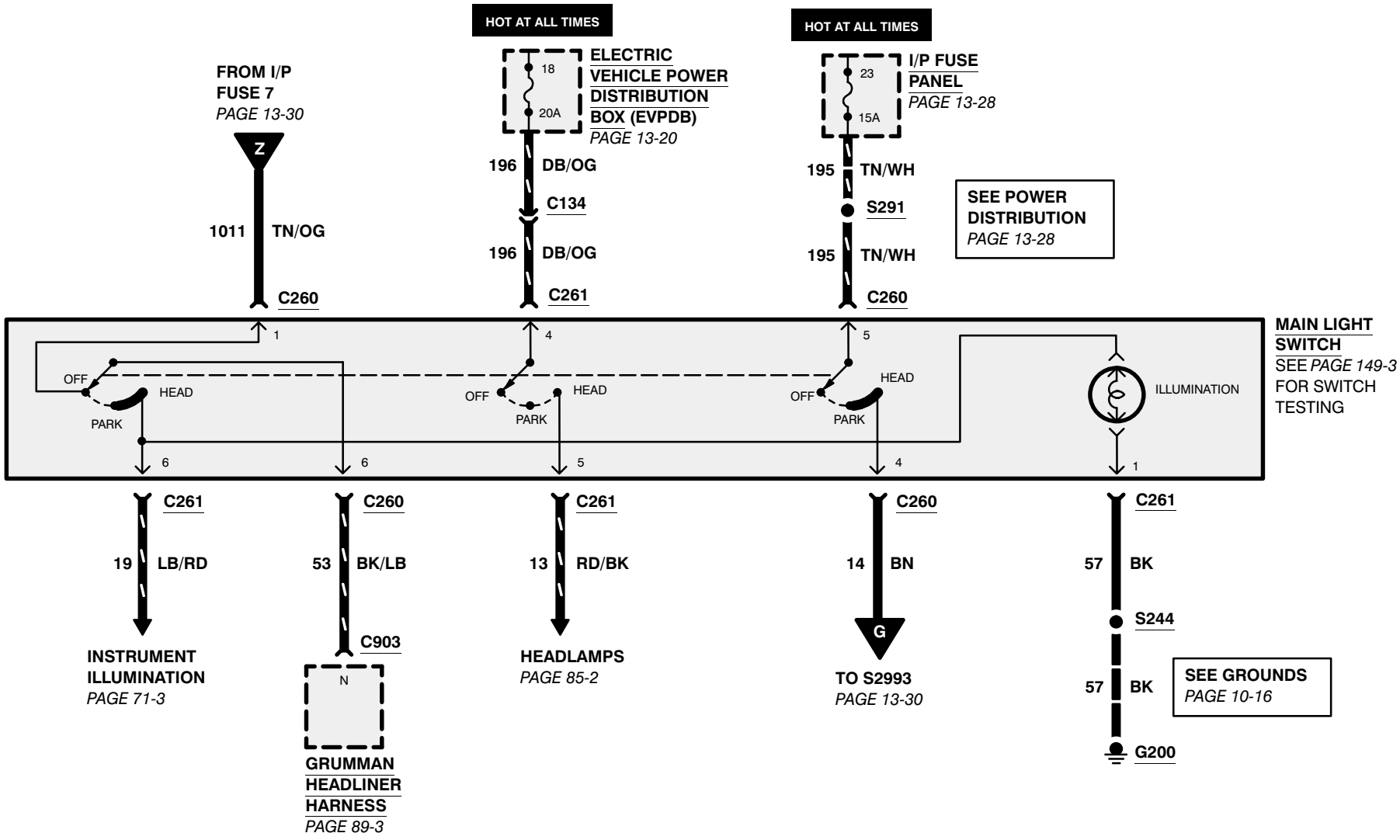
POSTAL



www.AUTOMOTIVEMECHANIC.ORG

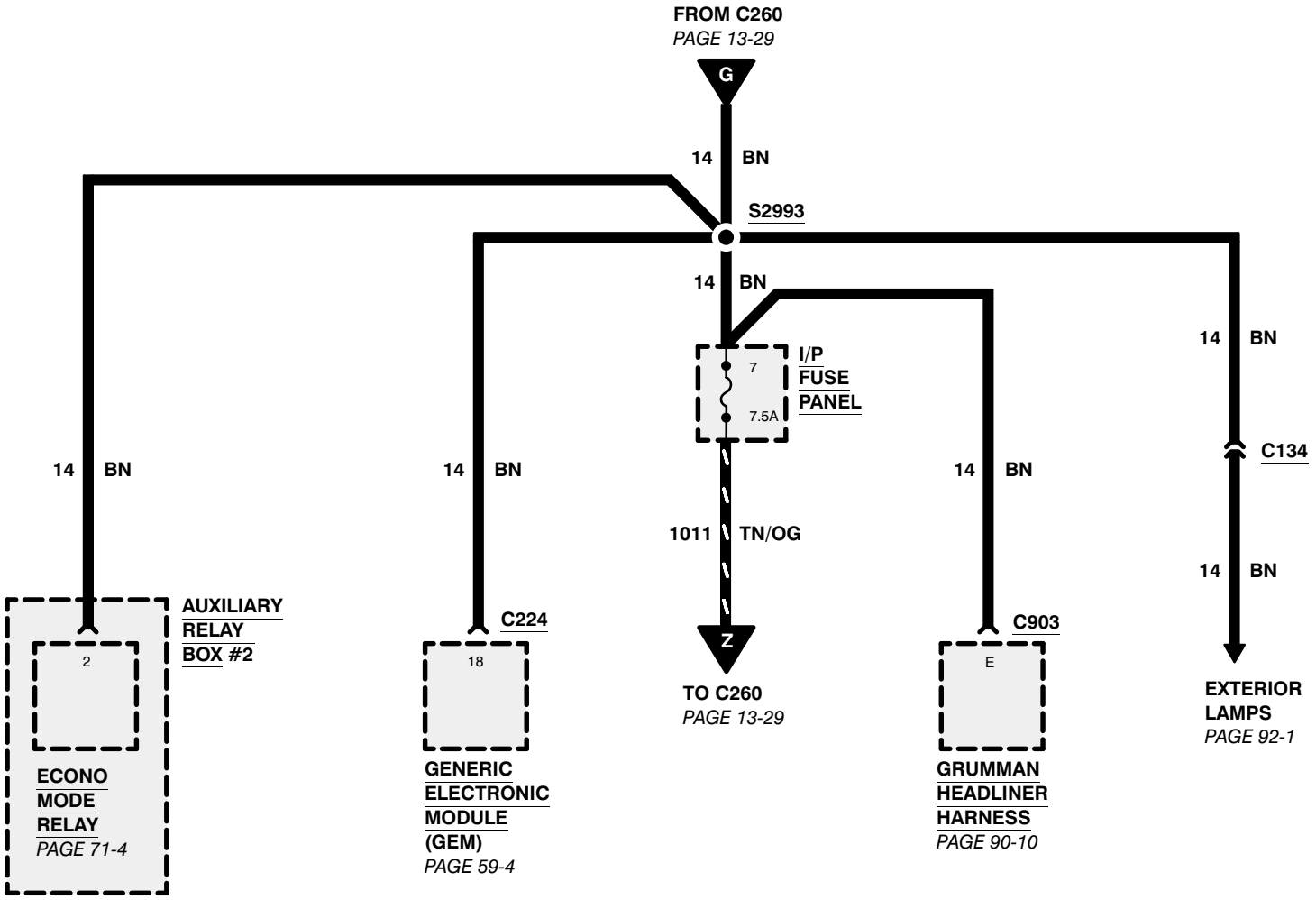
13-29 POWER DISTRIBUTION (LOW VOLTAGE)

POSTAL



www.AUTOMOTIVEMECHANIC.org

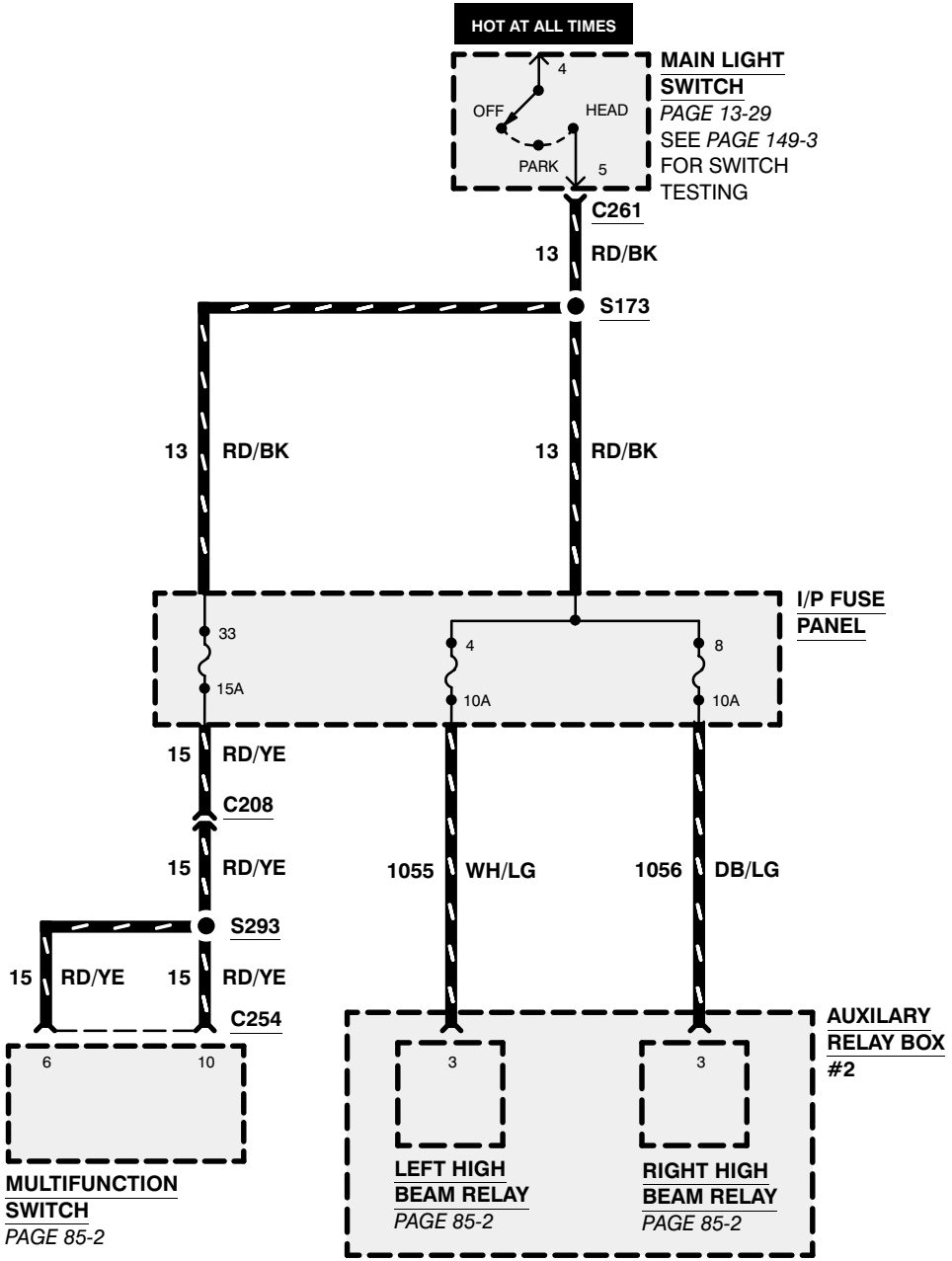
POSTAL



www.AUTOMOTIVEMECHANIC.org

13-31 POWER DISTRIBUTION (LOW VOLTAGE)

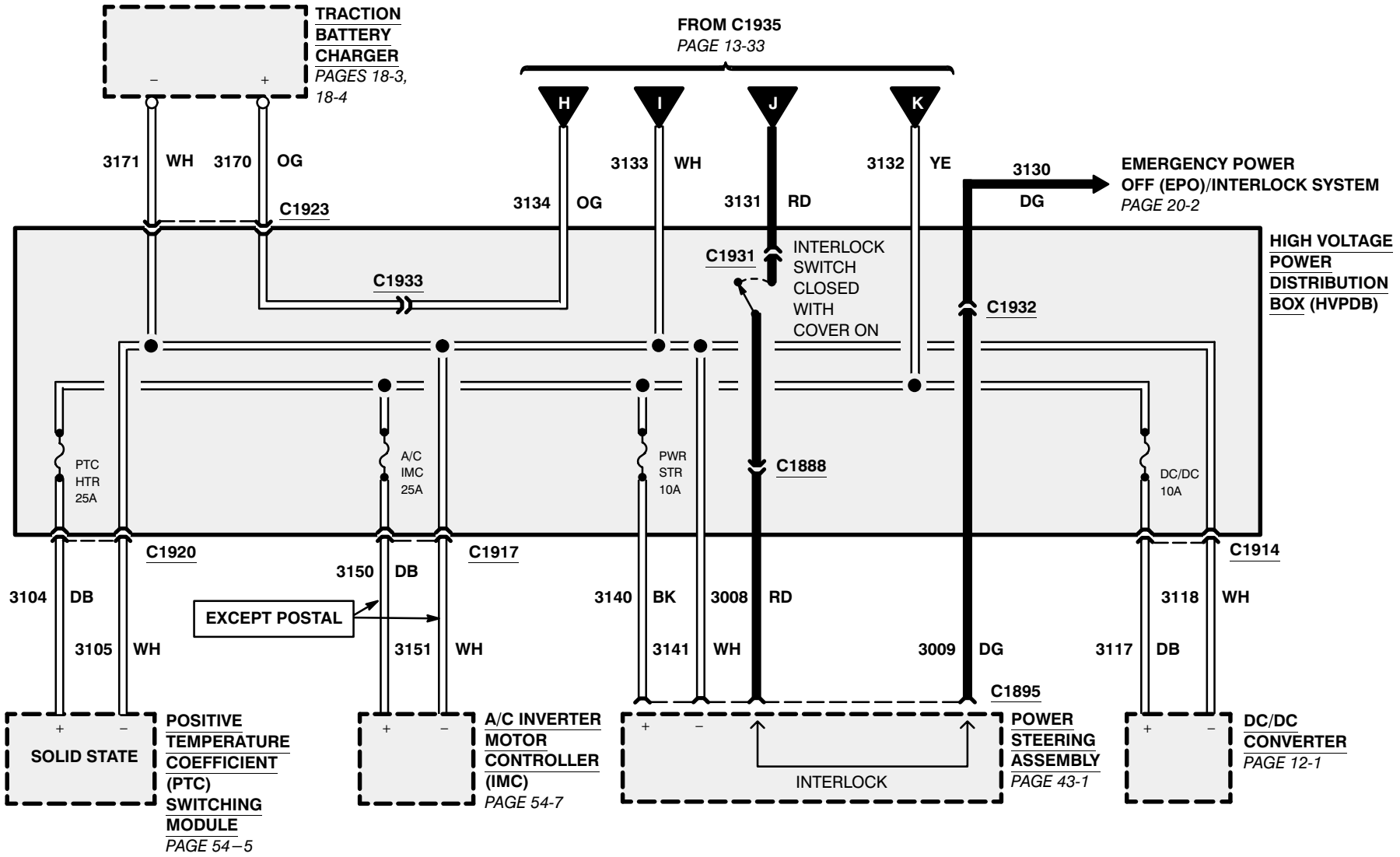
POSTAL



www.AUTOMOTIVEMECHANIC.org

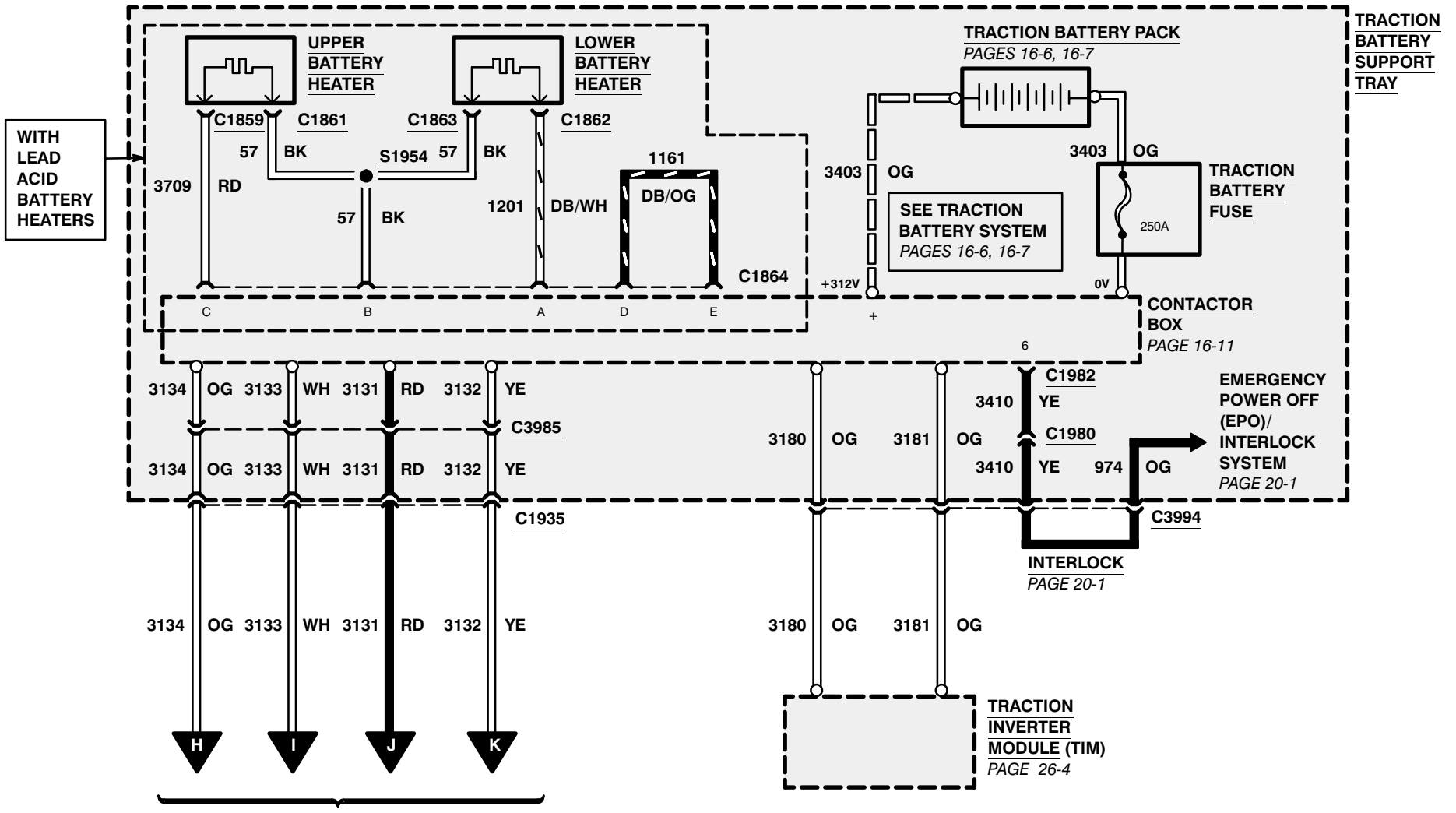
POWER DISTRIBUTION (HIGH VOLTAGE) 13-32

WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.



www.AUTOMOTIVEMECHANIC.org

13-33 POWER DISTRIBUTION (HIGH VOLTAGE)



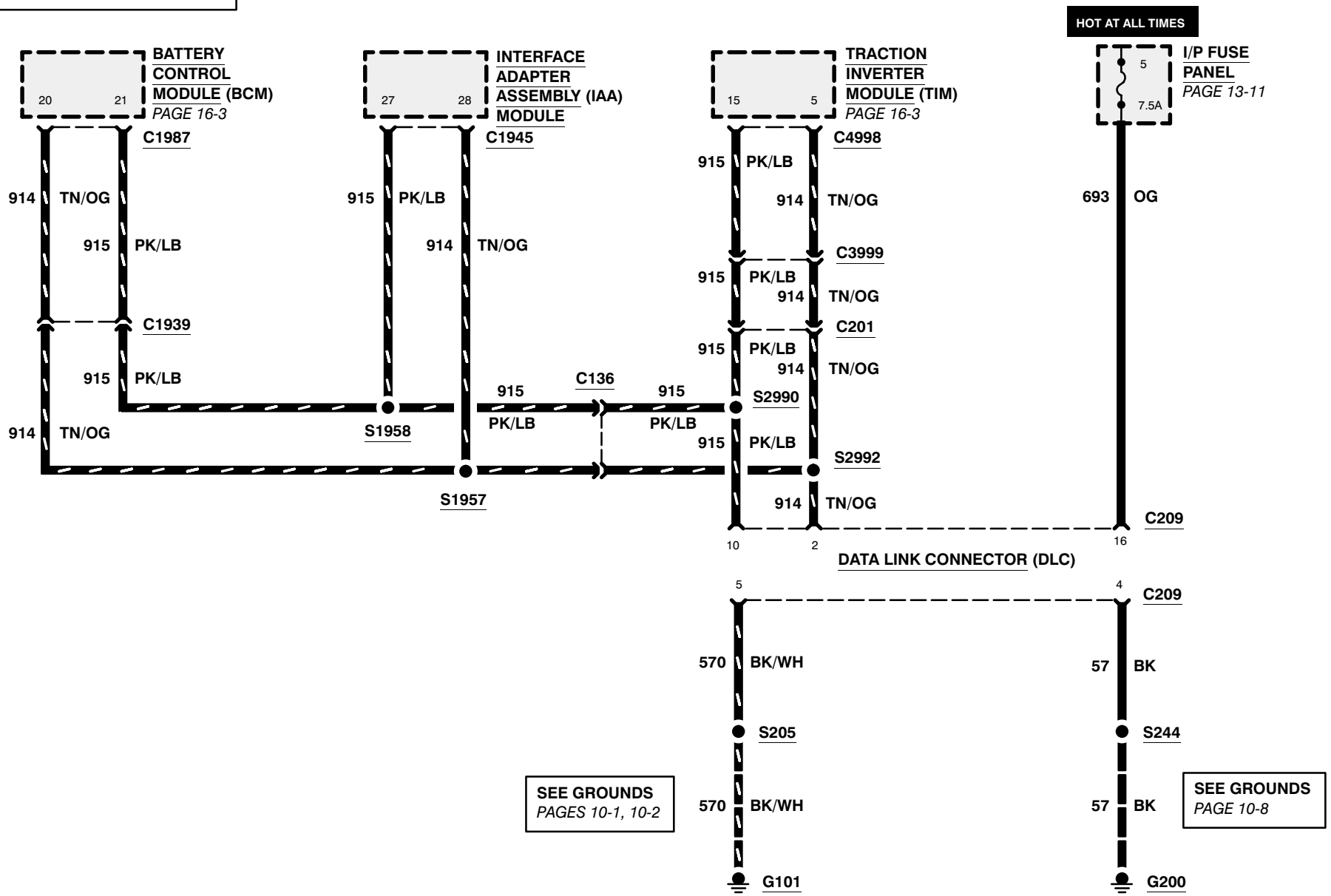
WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.ORG

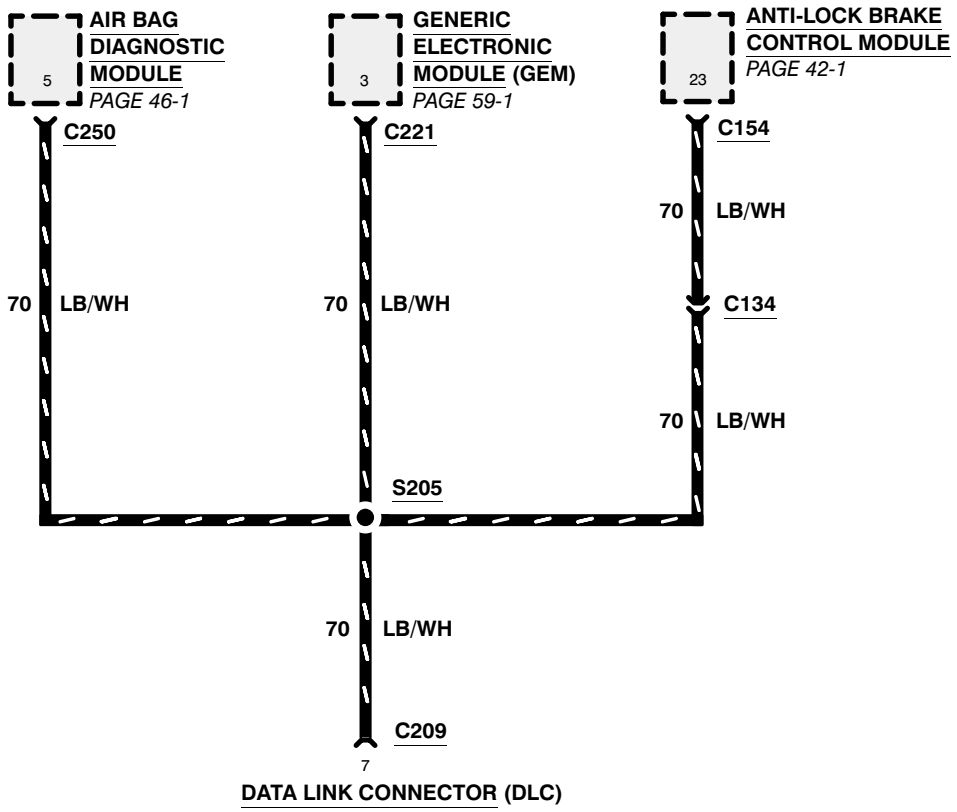
14-1 MULTIPLEX COMMUNICATION NETWORK

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

EXCEPT POSTAL

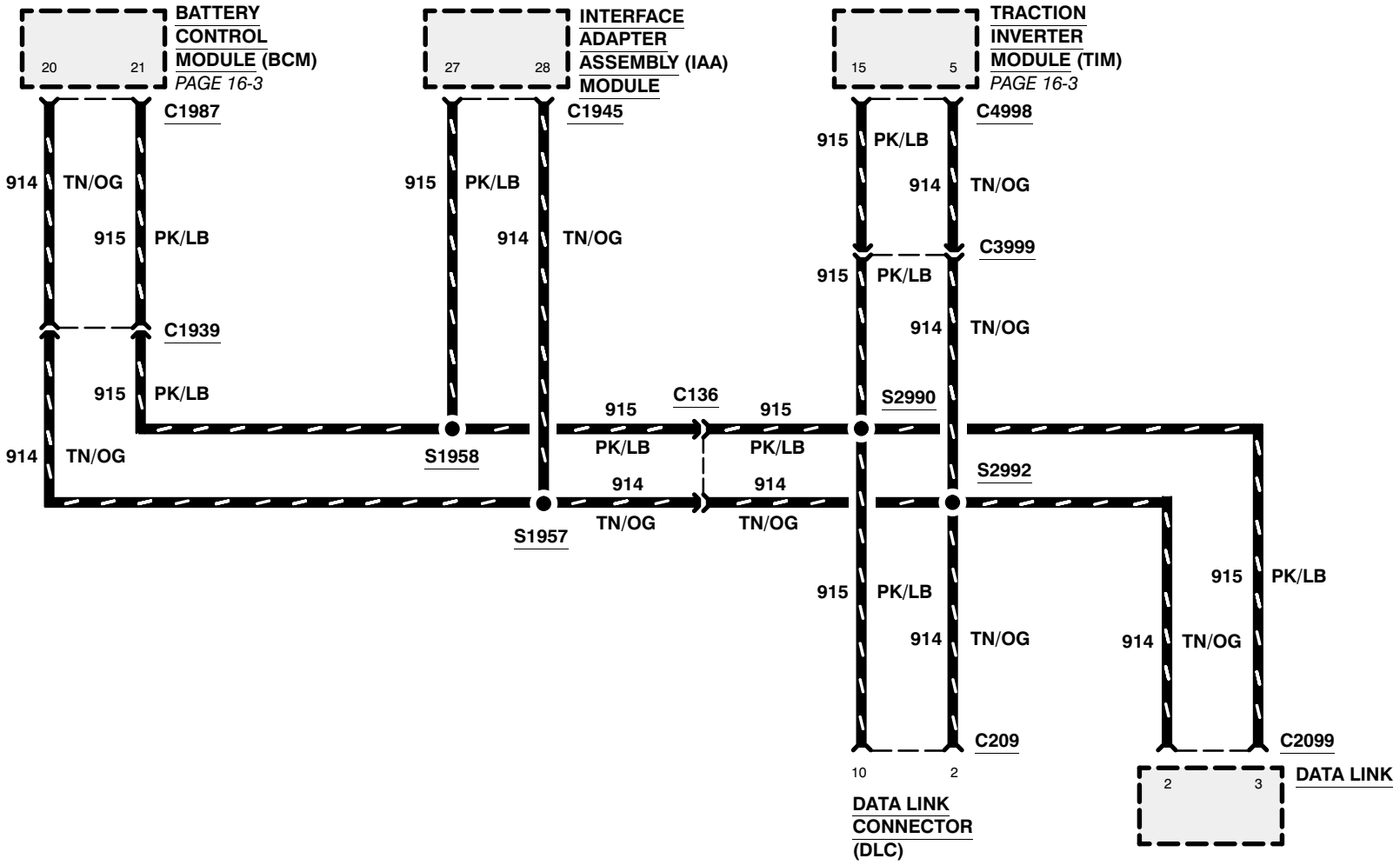


Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

www.AUTOMOTIVEMECHANIC.ORG

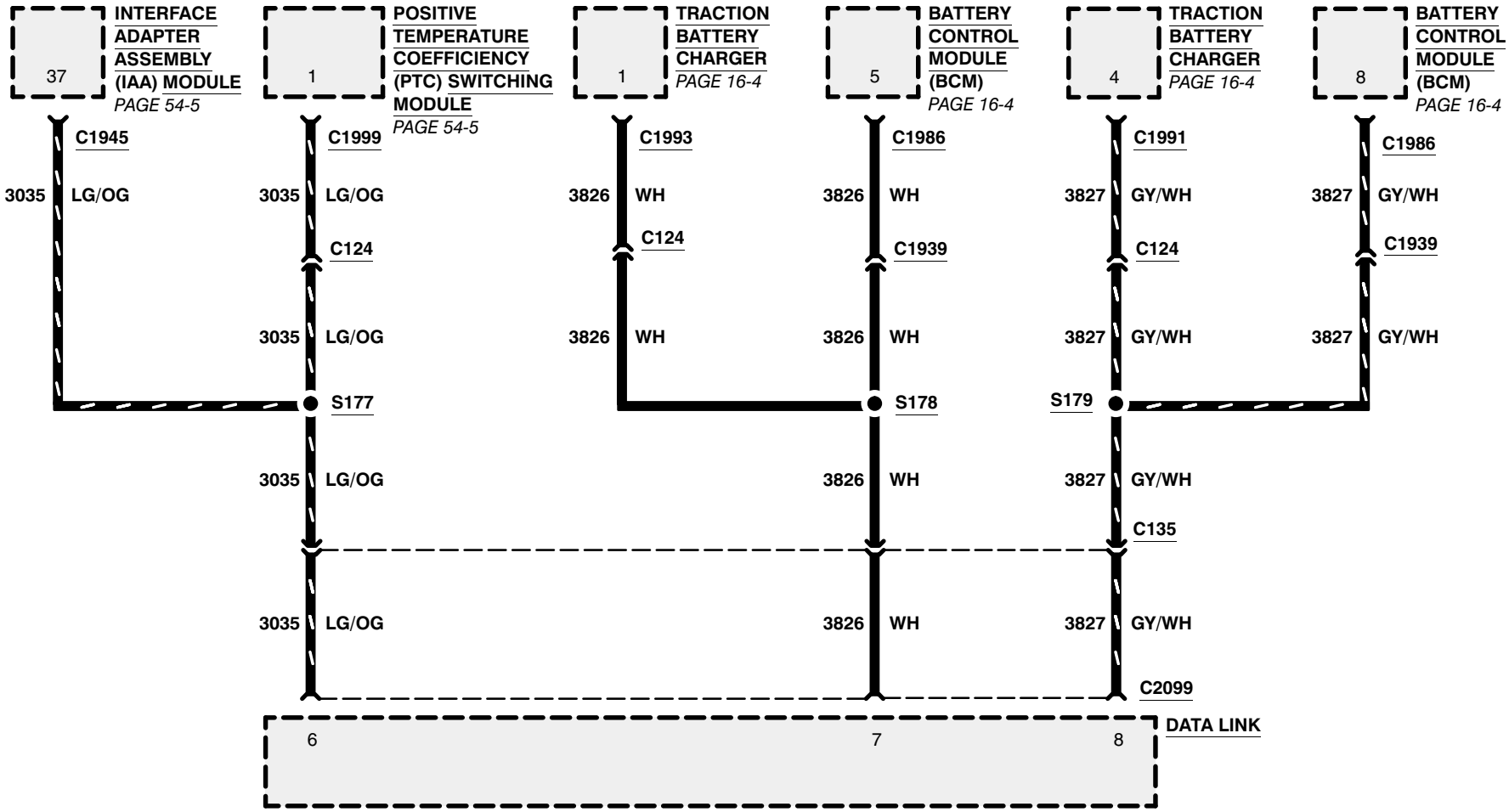
14-3 MULTIPLEX COMMUNICATION NETWORK

POSTAL



www.AUTOMOTIVEMECHANIC.org

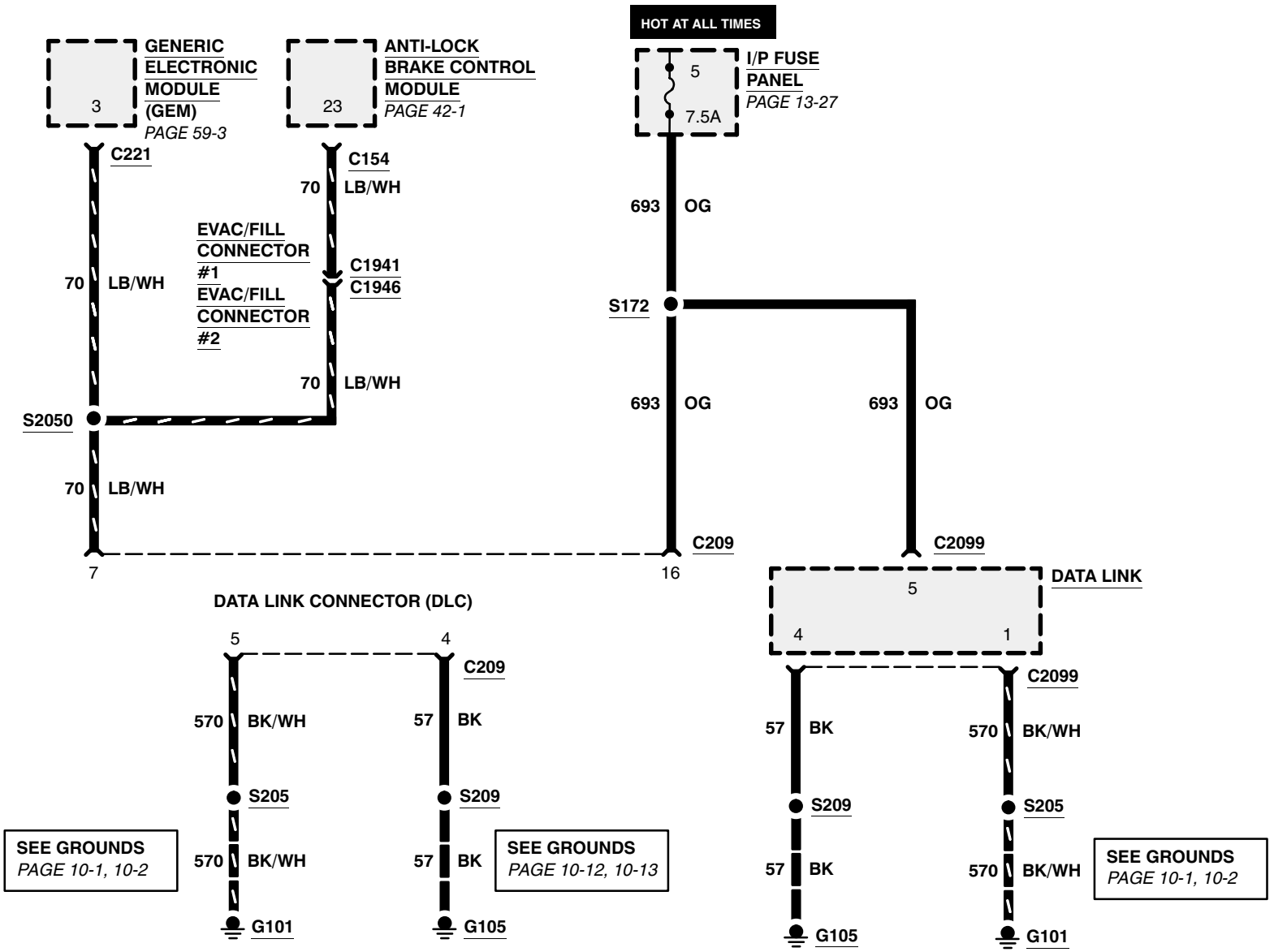
POSTAL



www.AUTOMOTIVEMECHANIC.org

14-5 MULTIPLEX COMMUNICATION NETWORK

POSTAL



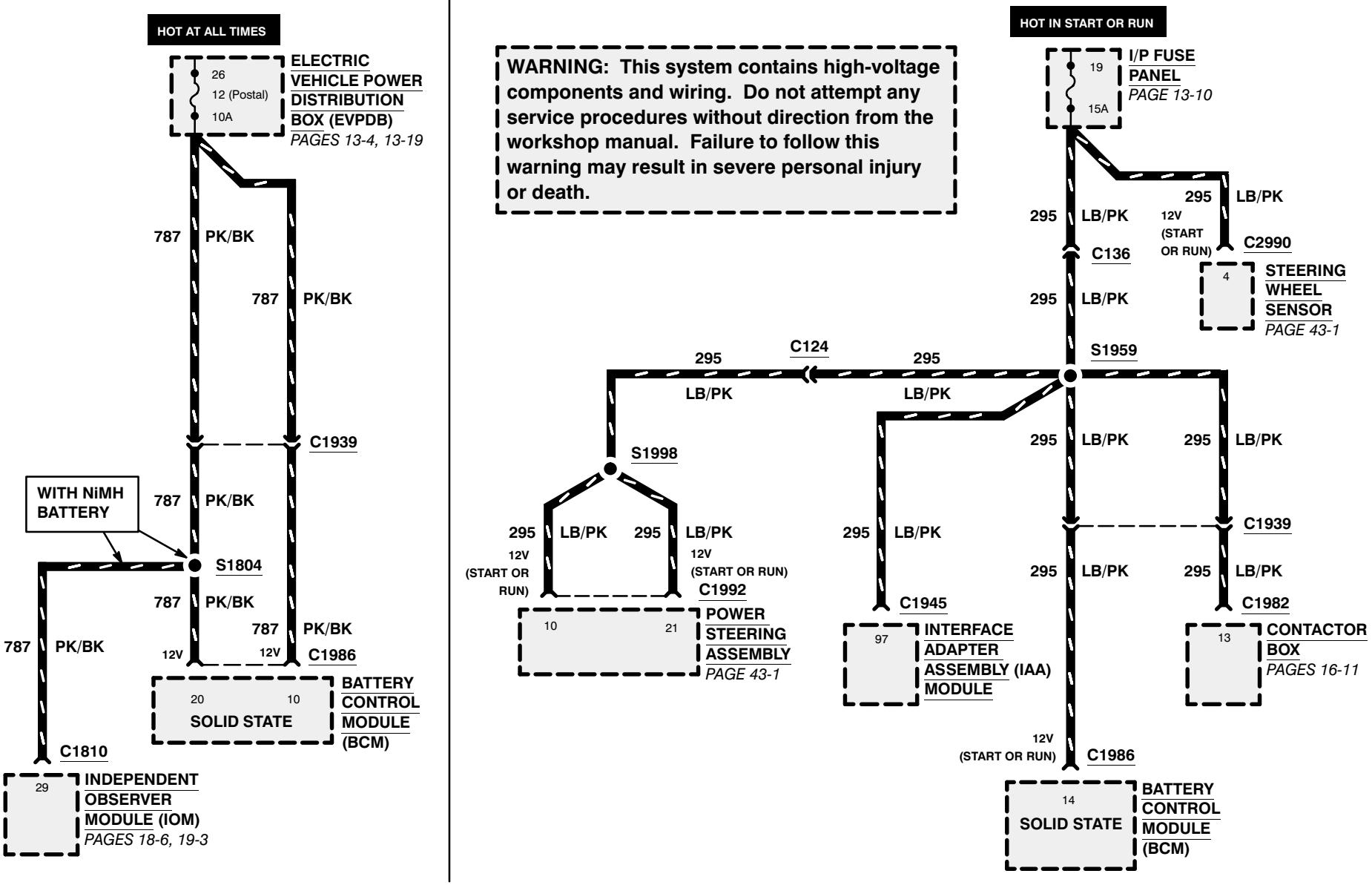
www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

16-1 TRACTION BATTERY SYSTEM

For diagnostic information, refer to Section 414-03 of the Workshop Manual.

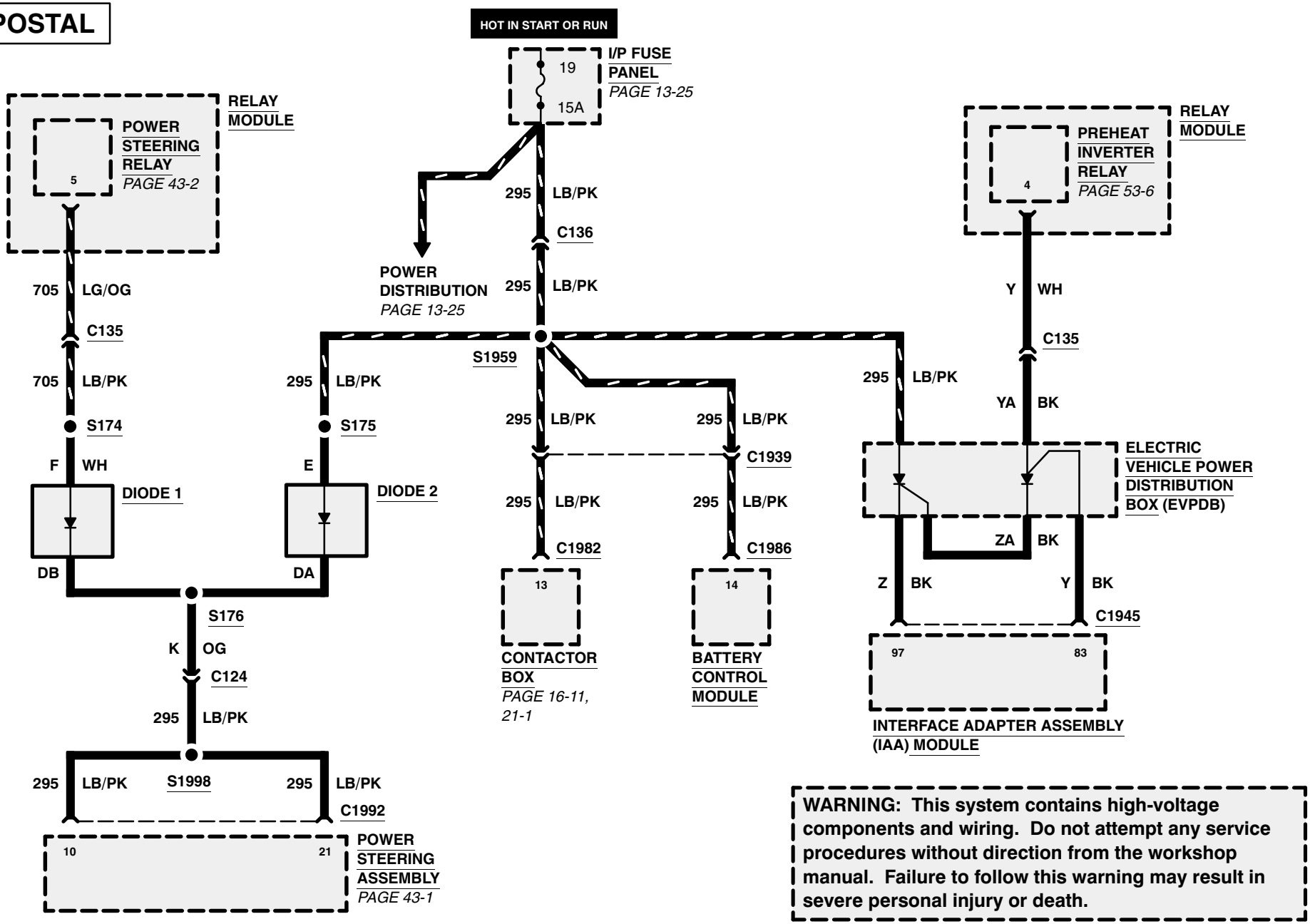
EXCEPT POSTAL



WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

www.AUTOMOTIVEMECHANIC.org

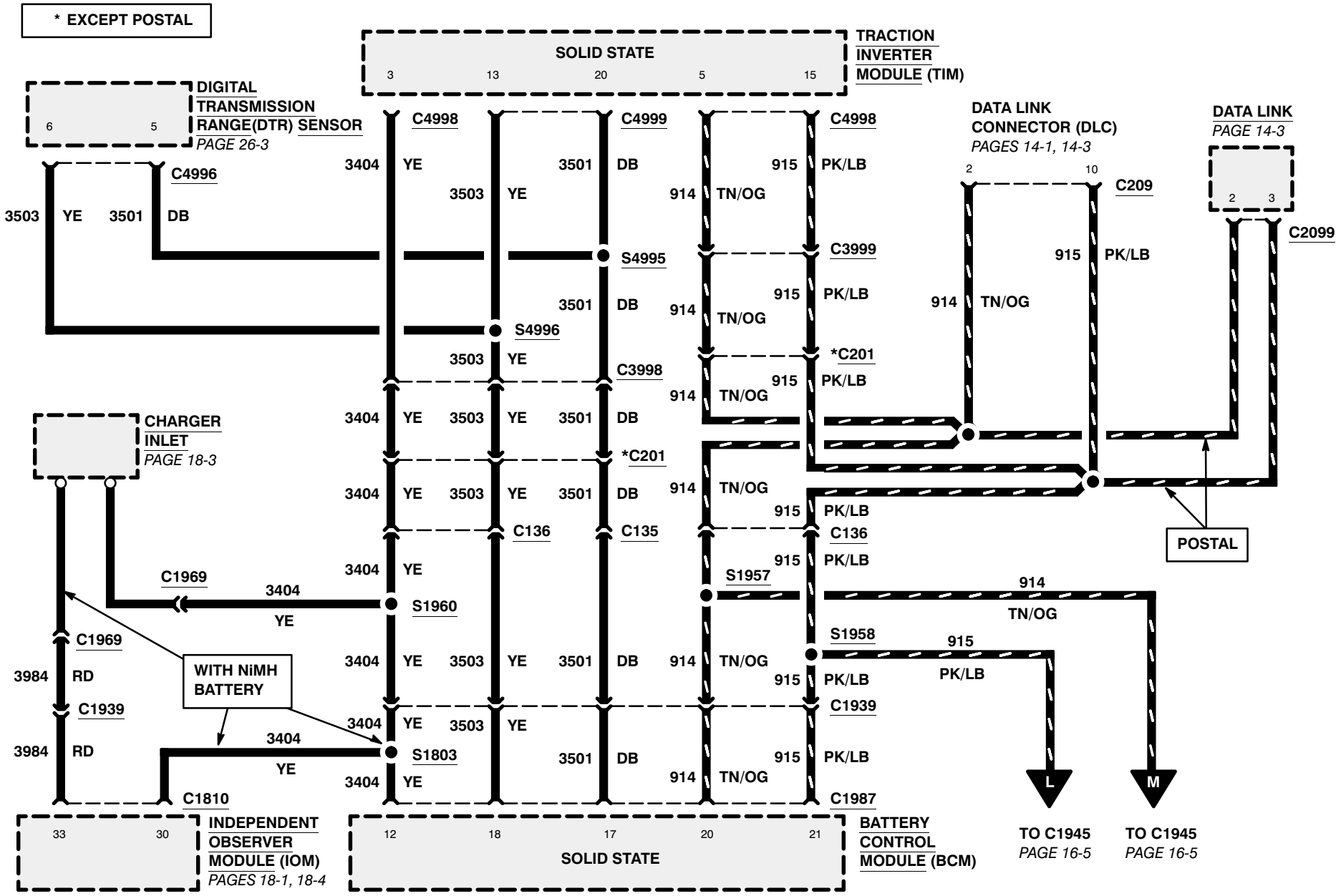
POSTAL



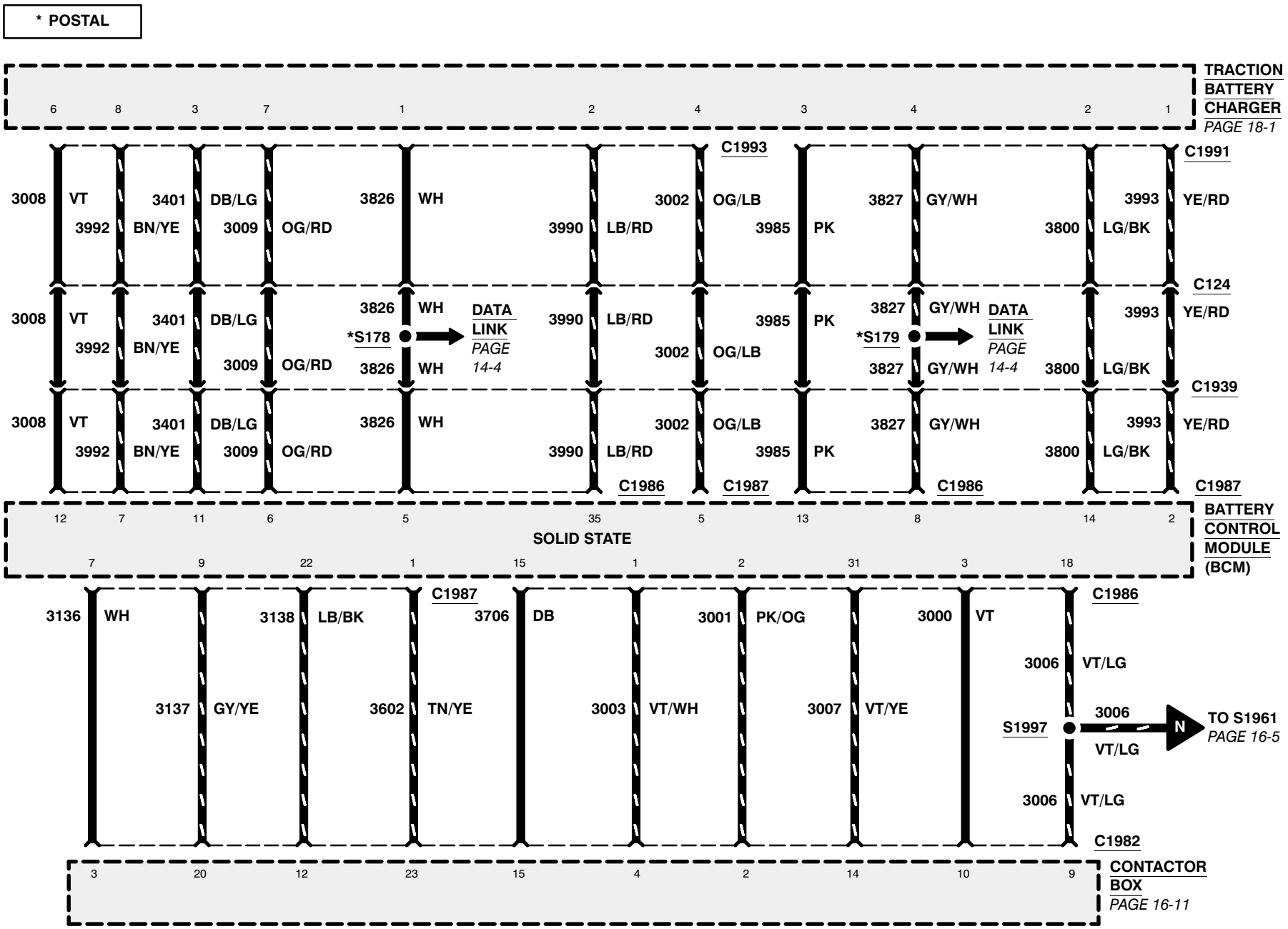
WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

www.AUTOMOTIVEMECHANIC.org

16-3 TRACTION BATTERY SYSTEM

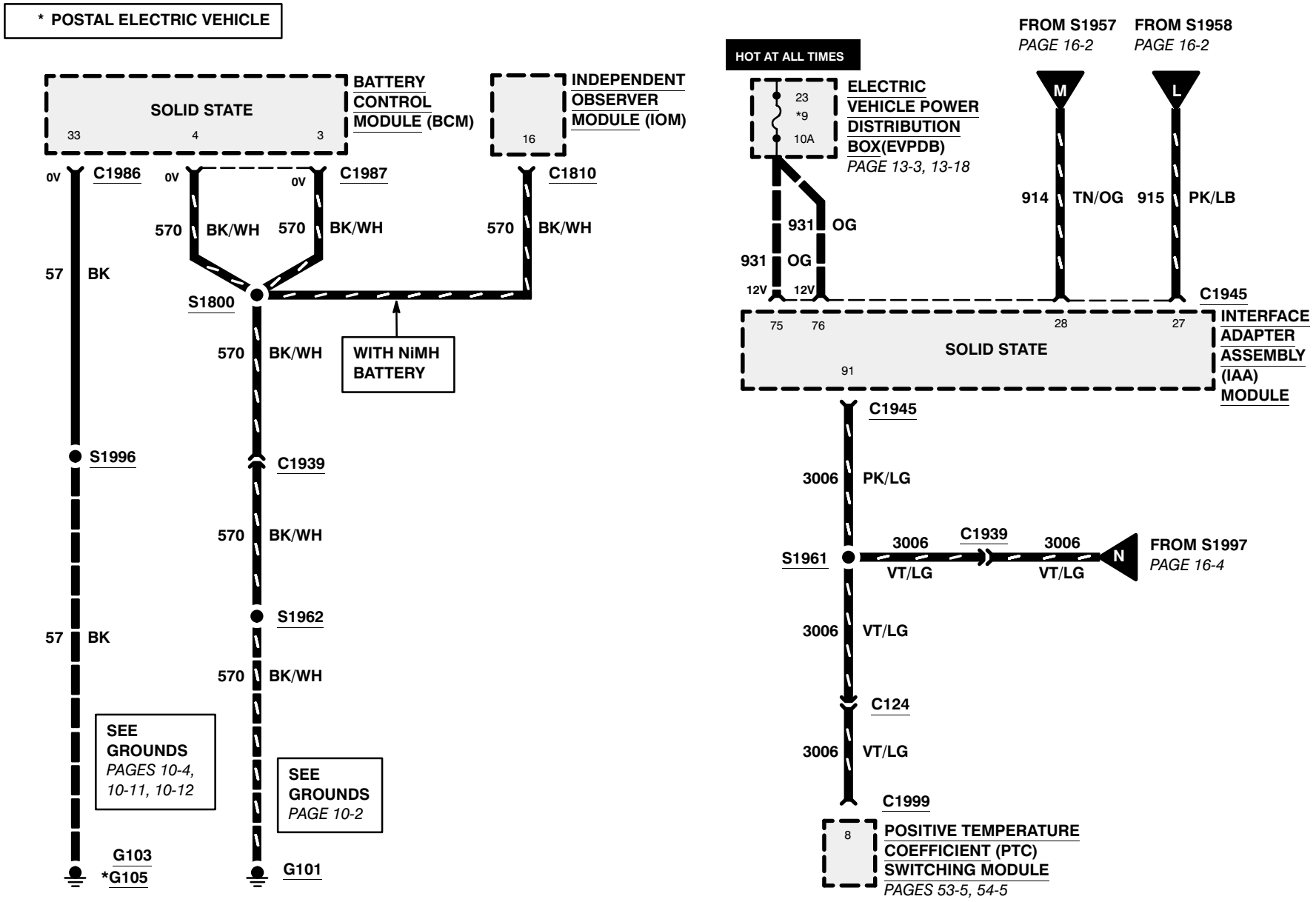


www.AUTOMOTIVEMECHANIC.org

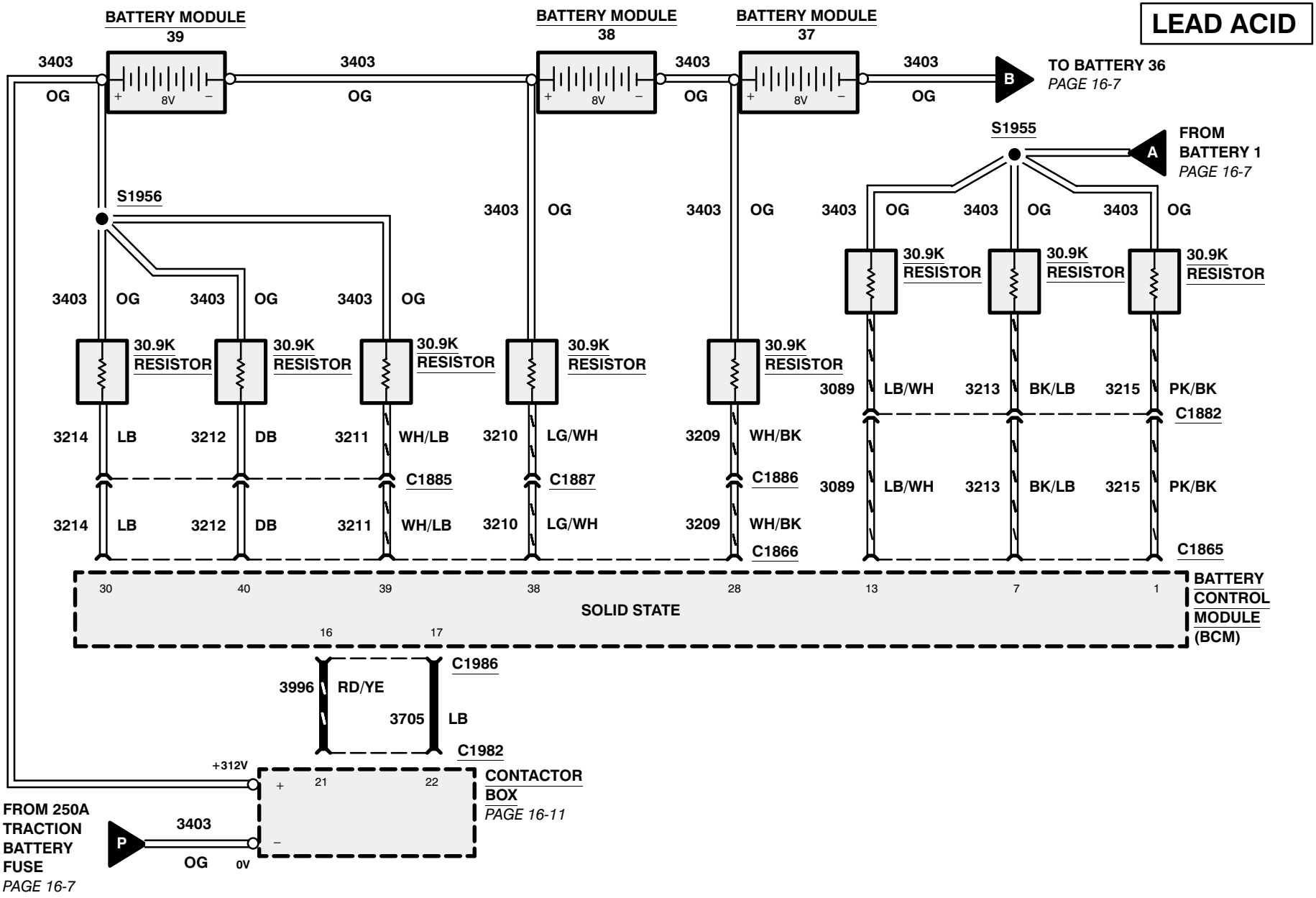


www.AUTOMOTIVEMECHANIC.org

16-5 TRACTION BATTERY SYSTEM

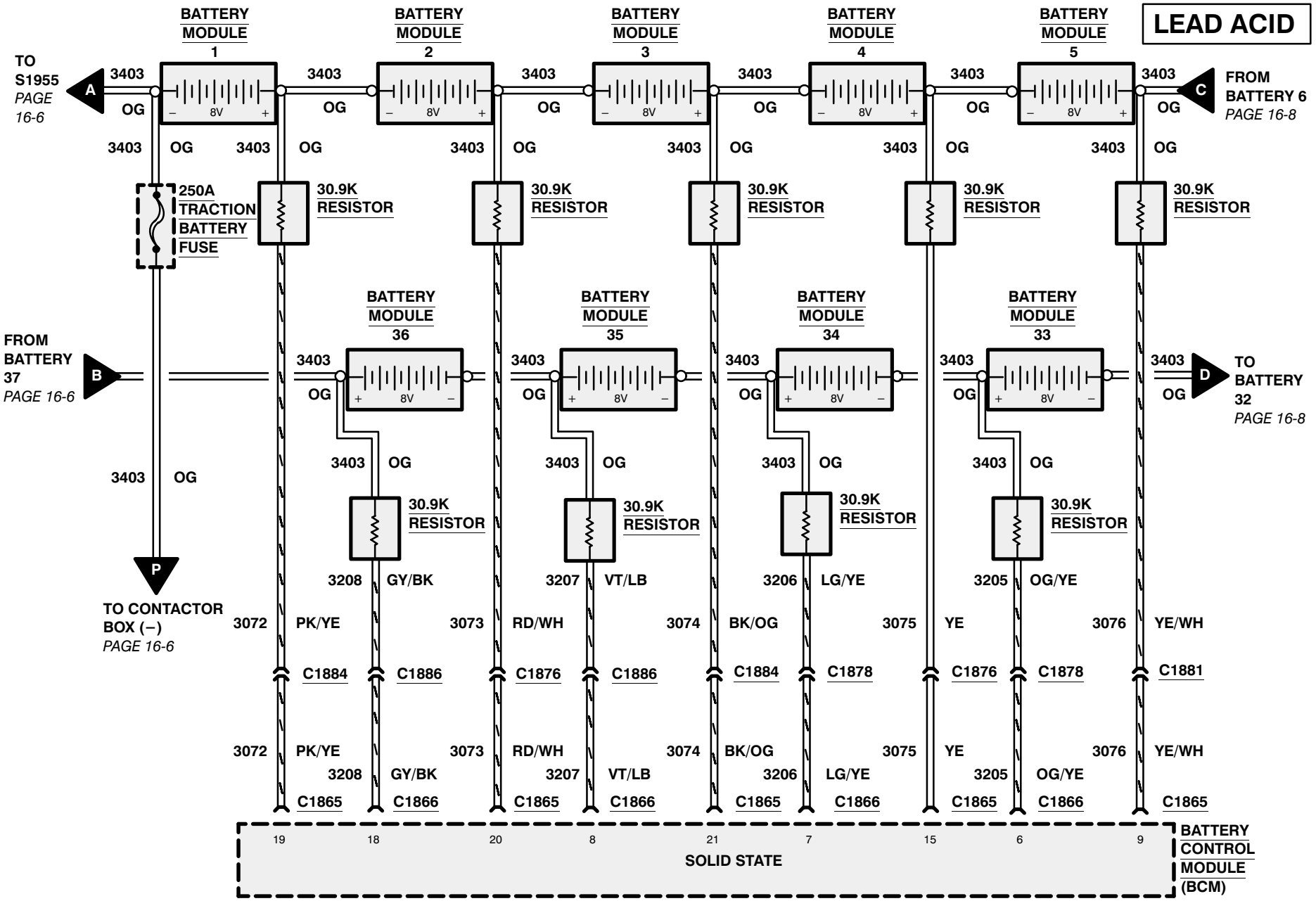


www.AUTOMOTIVEMECHANIC.org

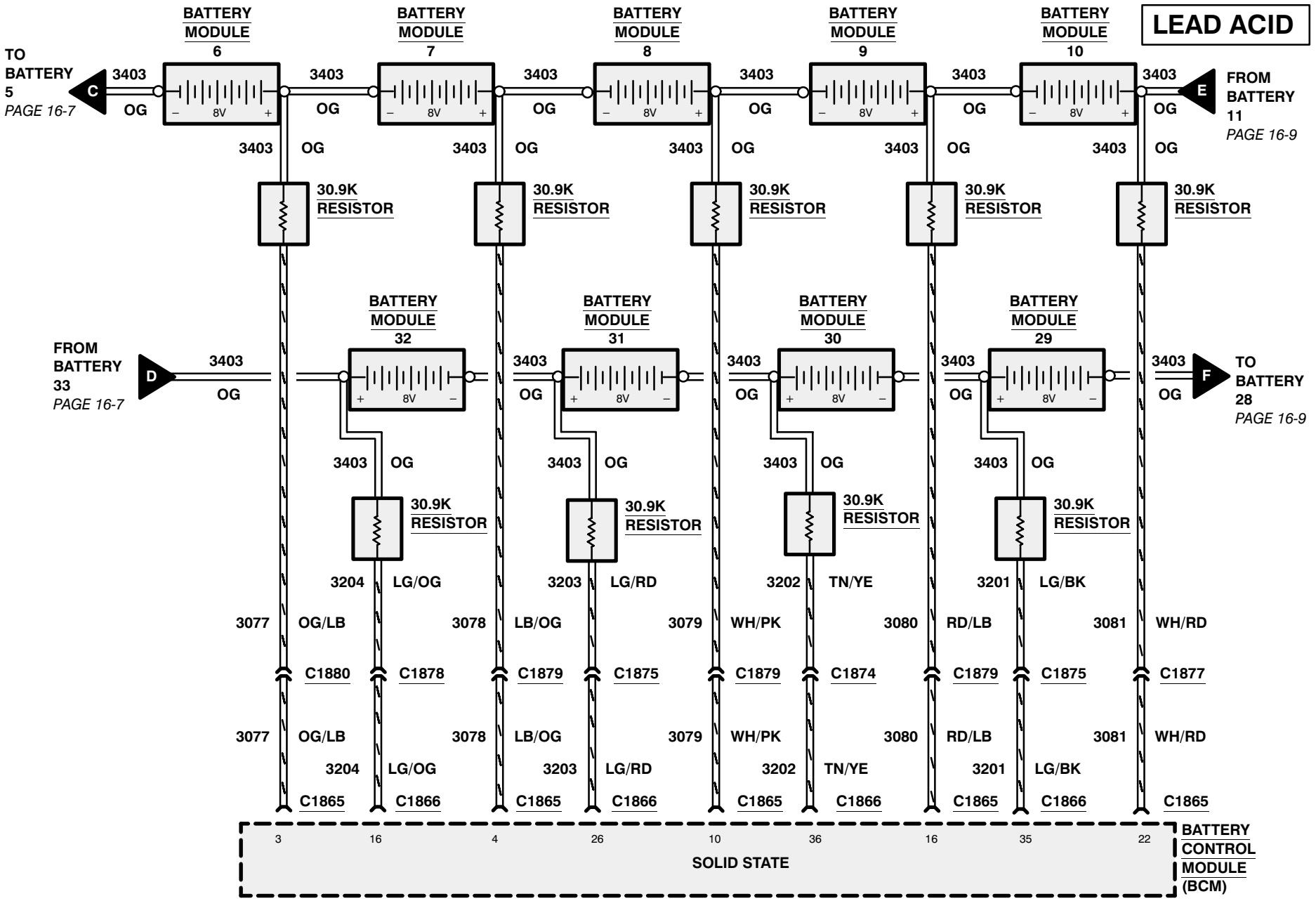


www.AUTOMOTIVEMECHANIC.org

16-7 TRACTION BATTERY SYSTEM

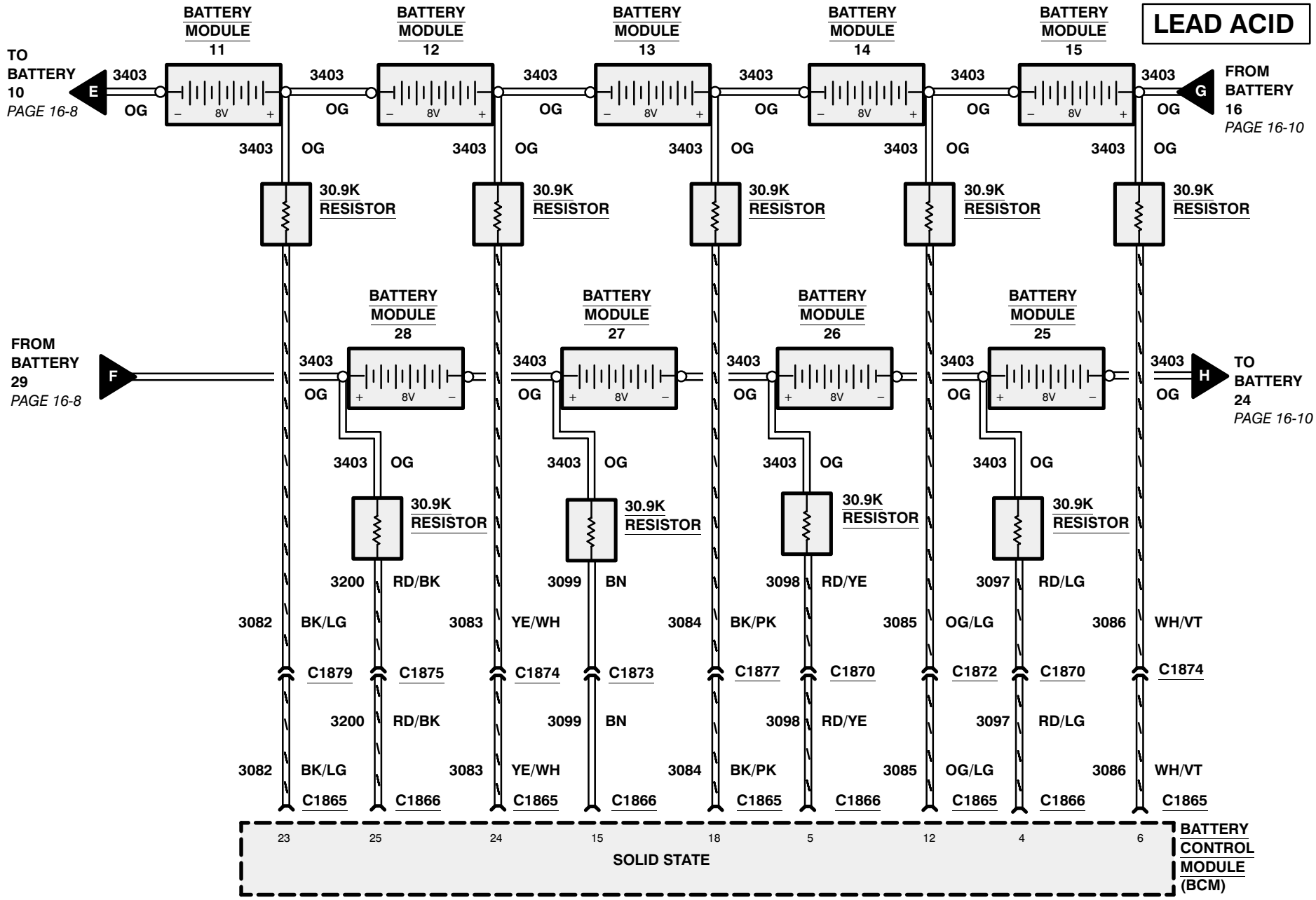


www.AUTOMOTIVEMECHANIC.org

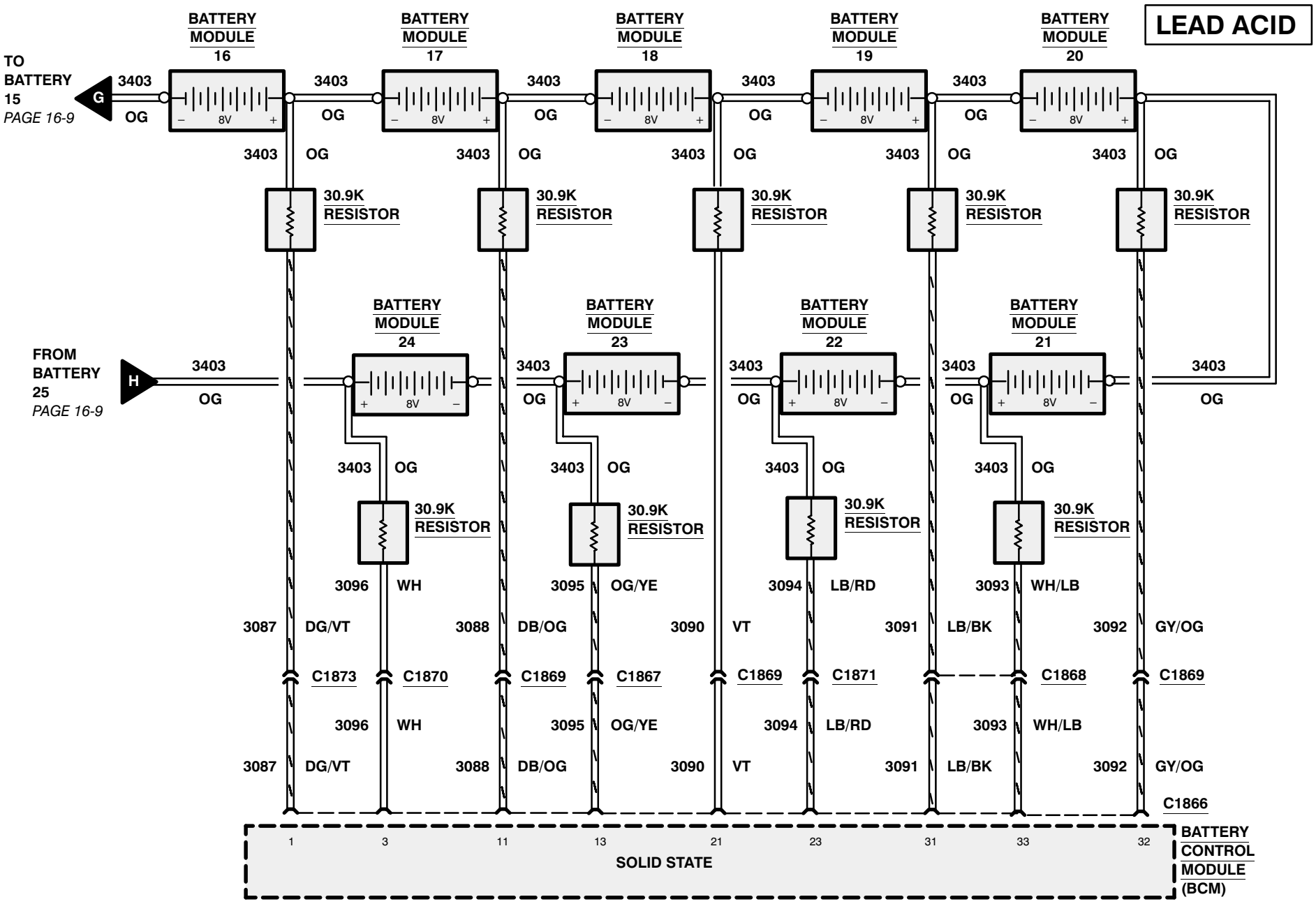


www.AUTOMOTIVEMECHANIC.org

16-9 TRACTION BATTERY SYSTEM

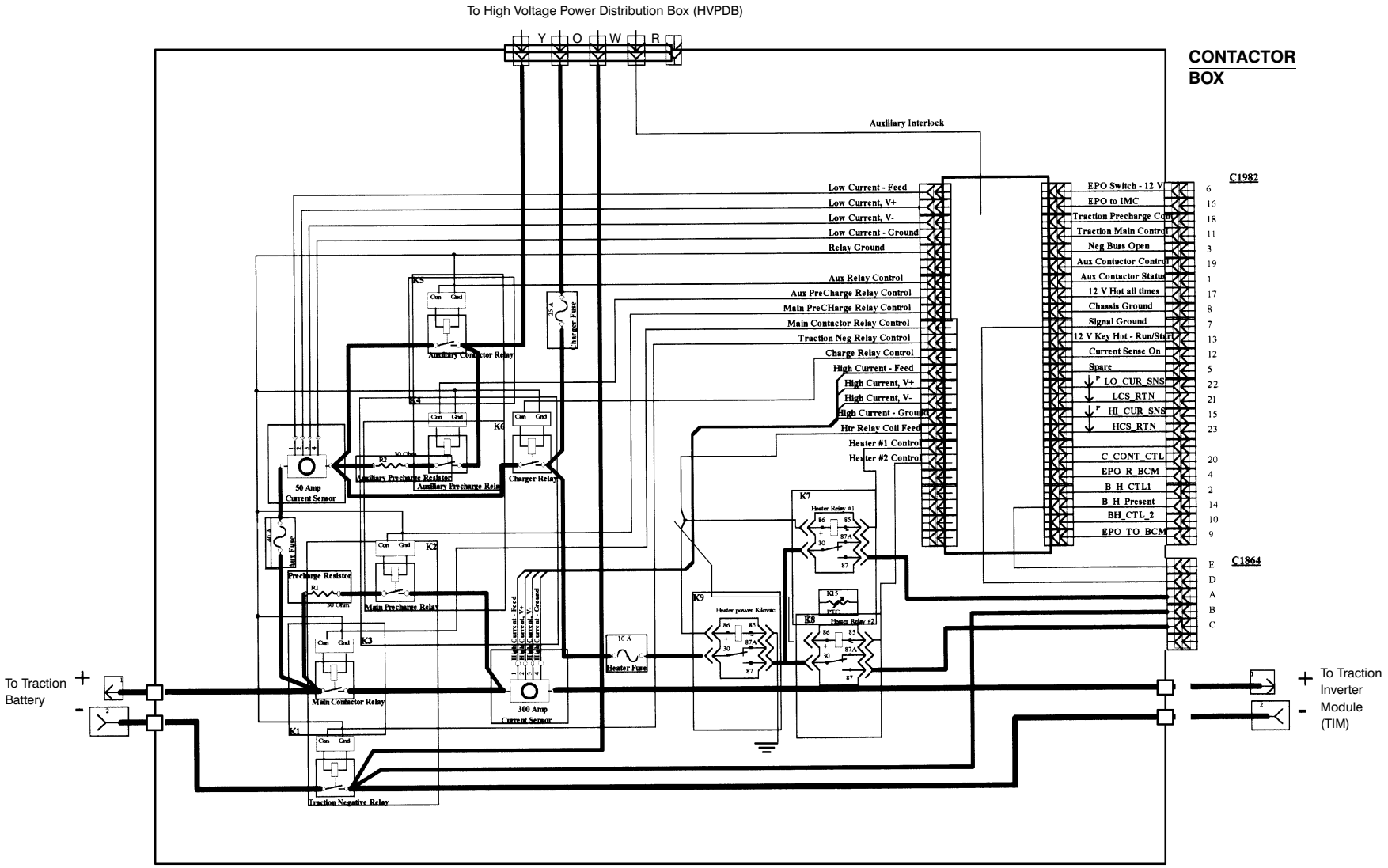


www.AUTOMOTIVEMECHANIC.org



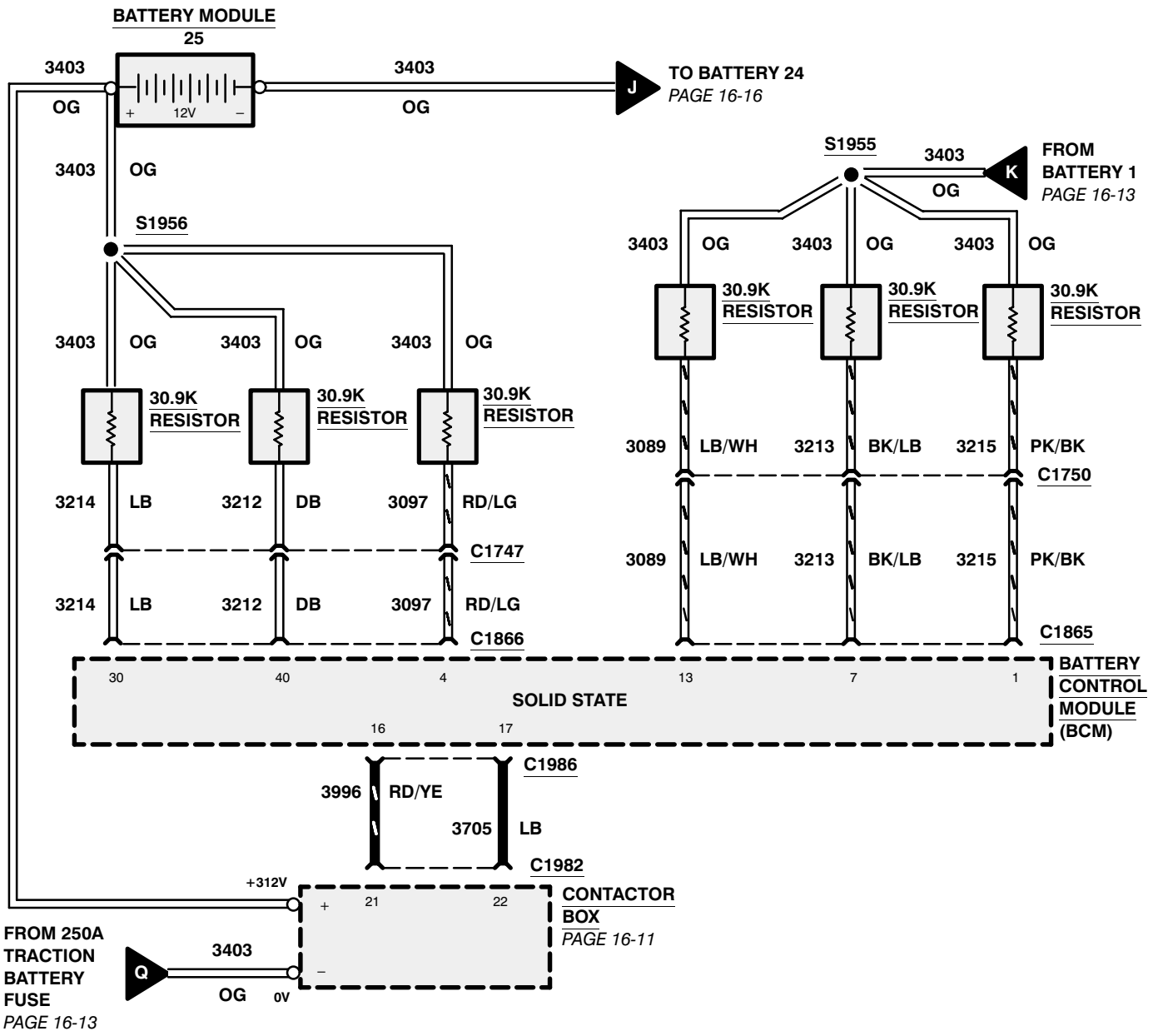
www.AUTOMOTIVEMECHANIC.ORG

16-11 TRACTION BATTERY SYSTEM



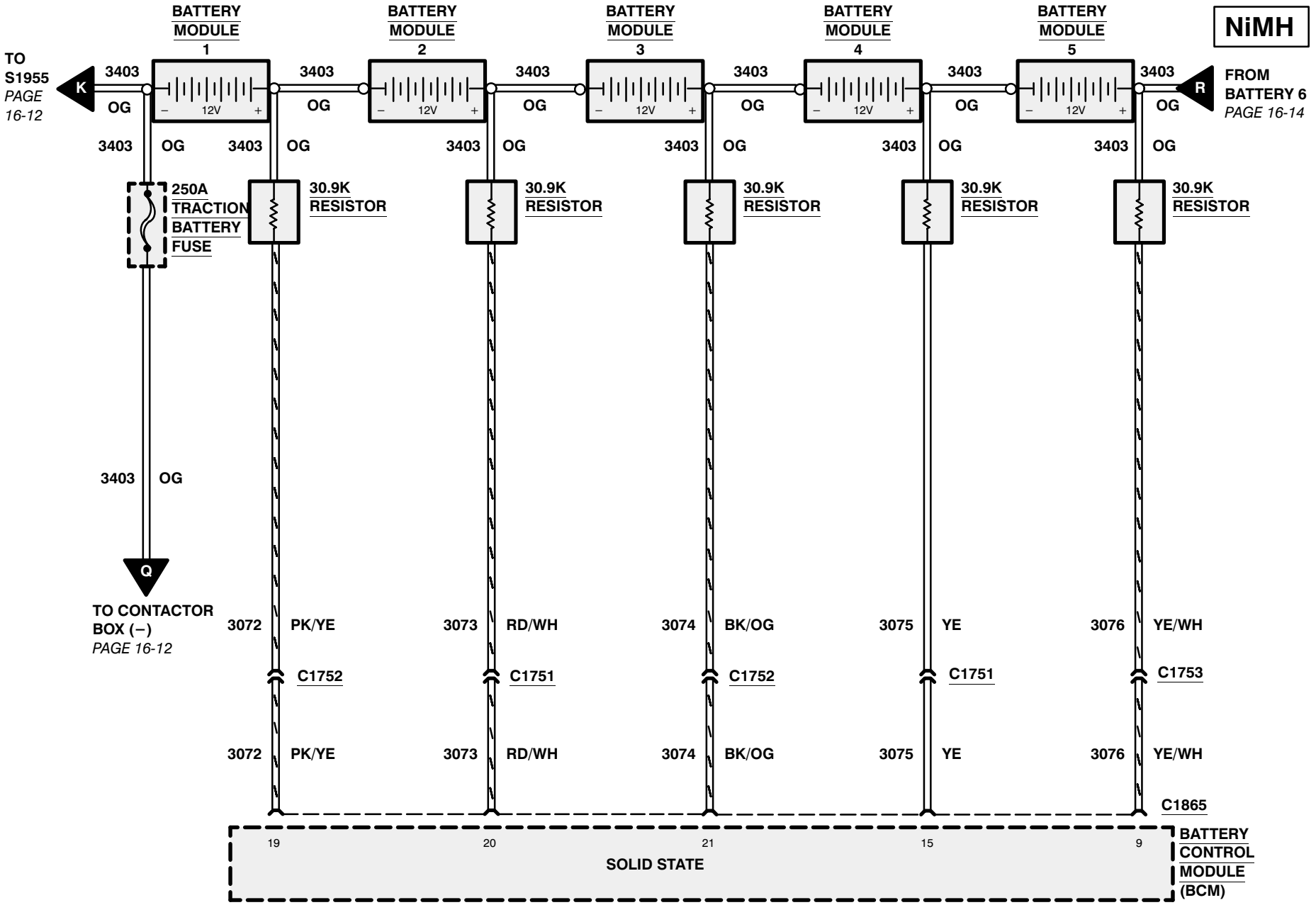
www.AUTOMOTIVEMECHANIC.ORG

NiMH

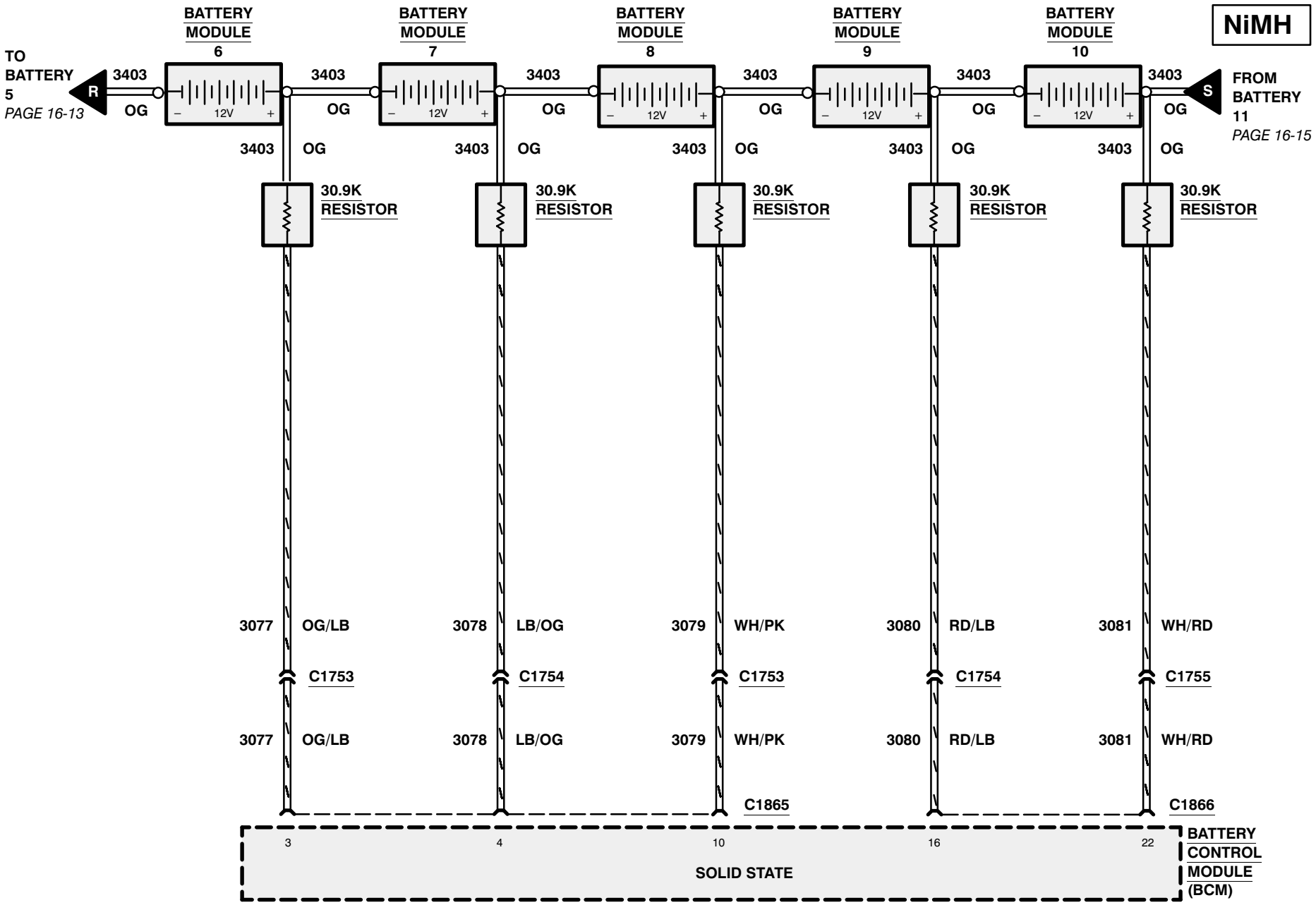


www.AUTOMOTIVEMECHANIC.org

16-13 TRACTION BATTERY SYSTEM

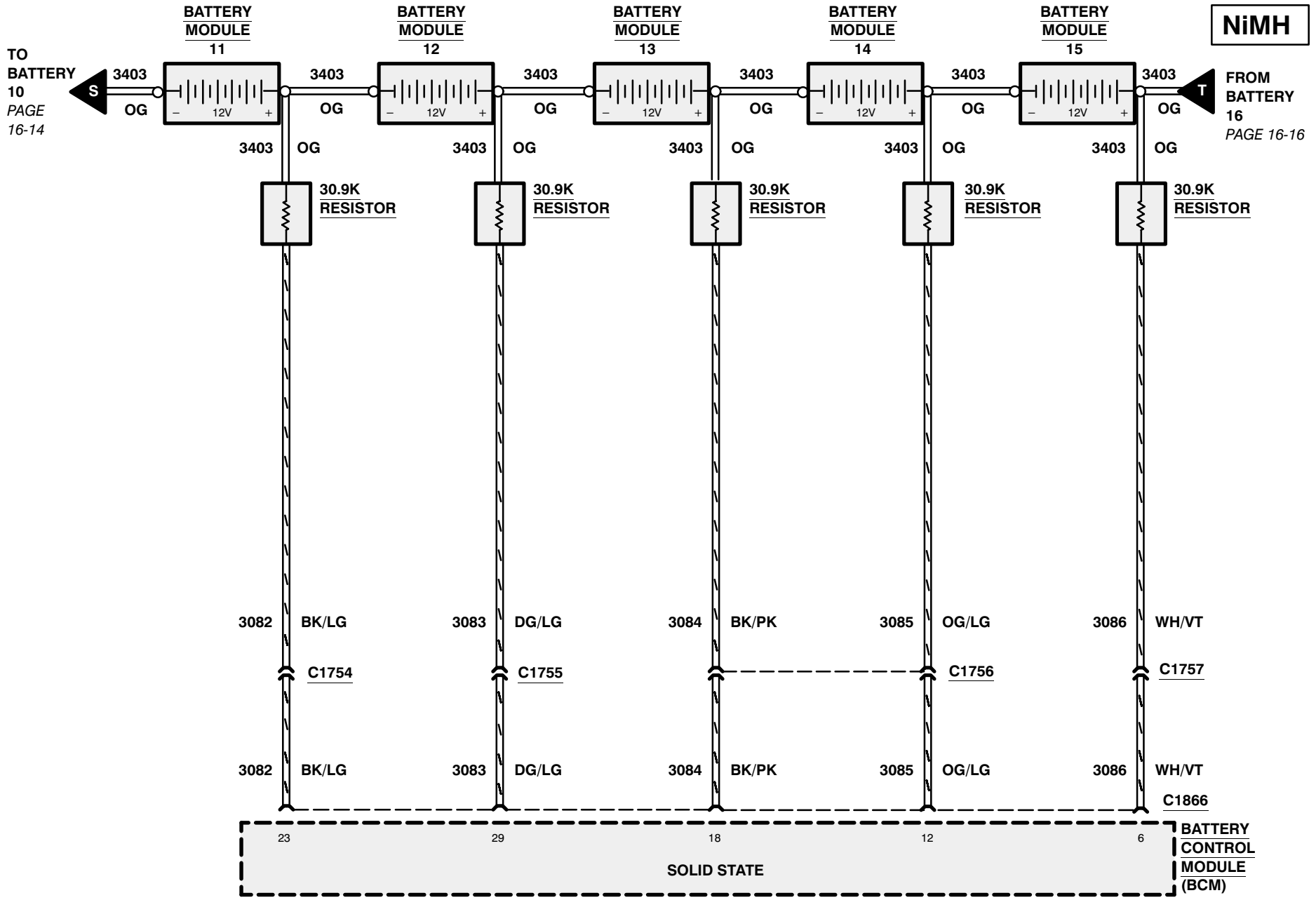


www.AUTOMOTIVEMECHANIC.org



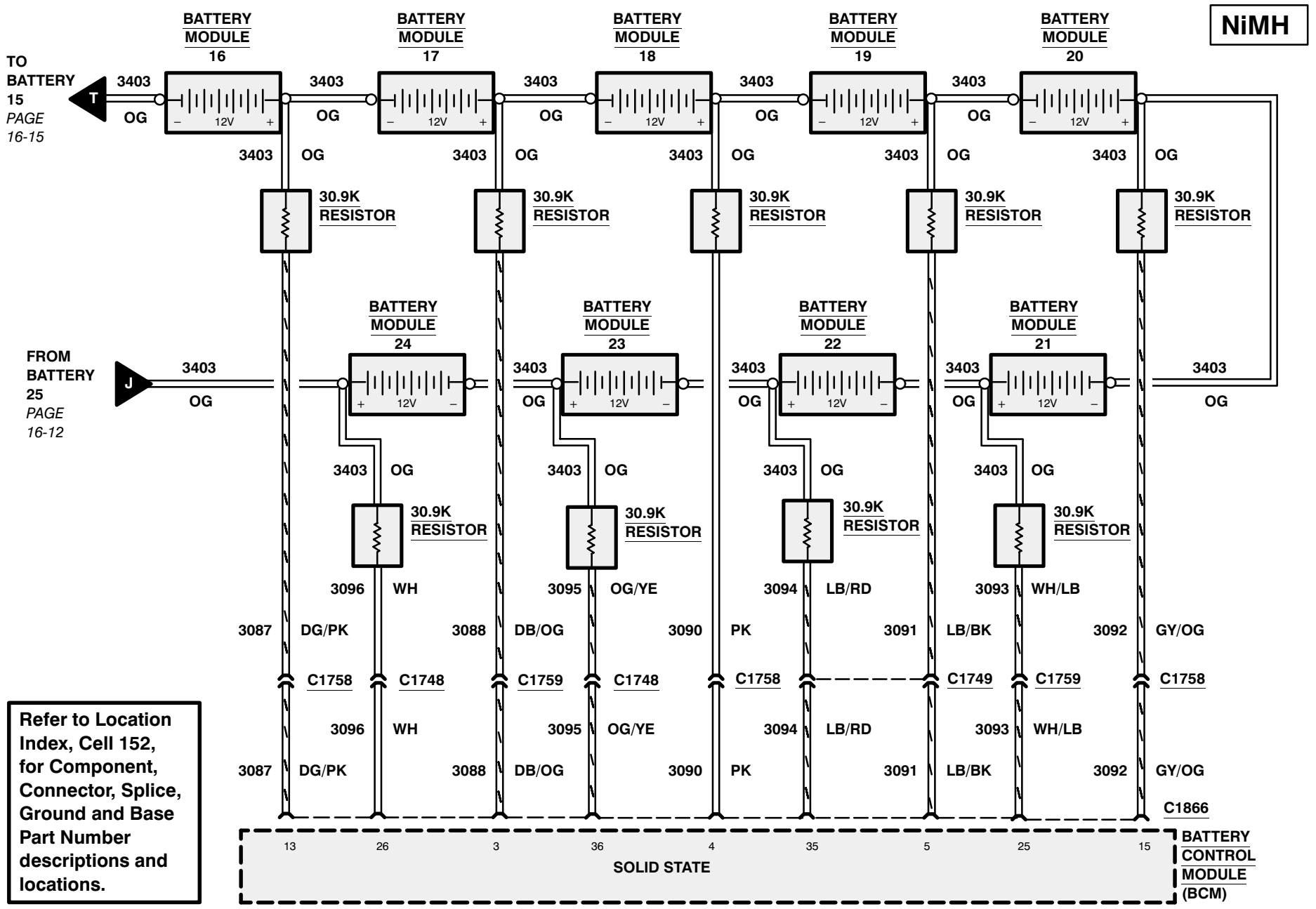
www.AUTOMOTIVEMECHANIC.org

16-15 TRACTION BATTERY SYSTEM



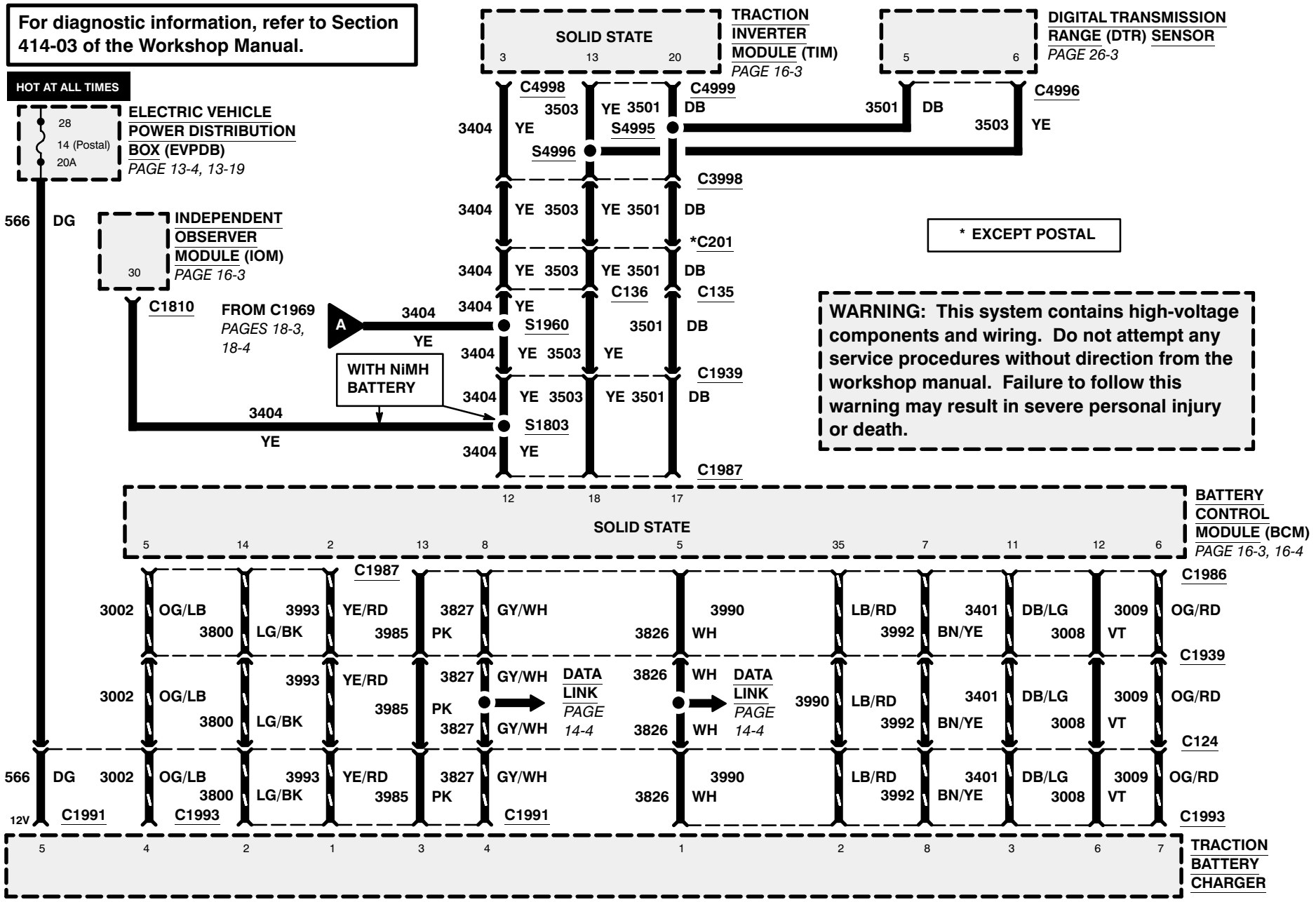
www.AUTOMOTIVEMECHANIC.org

TRACTION BATTERY SYSTEM 16-16

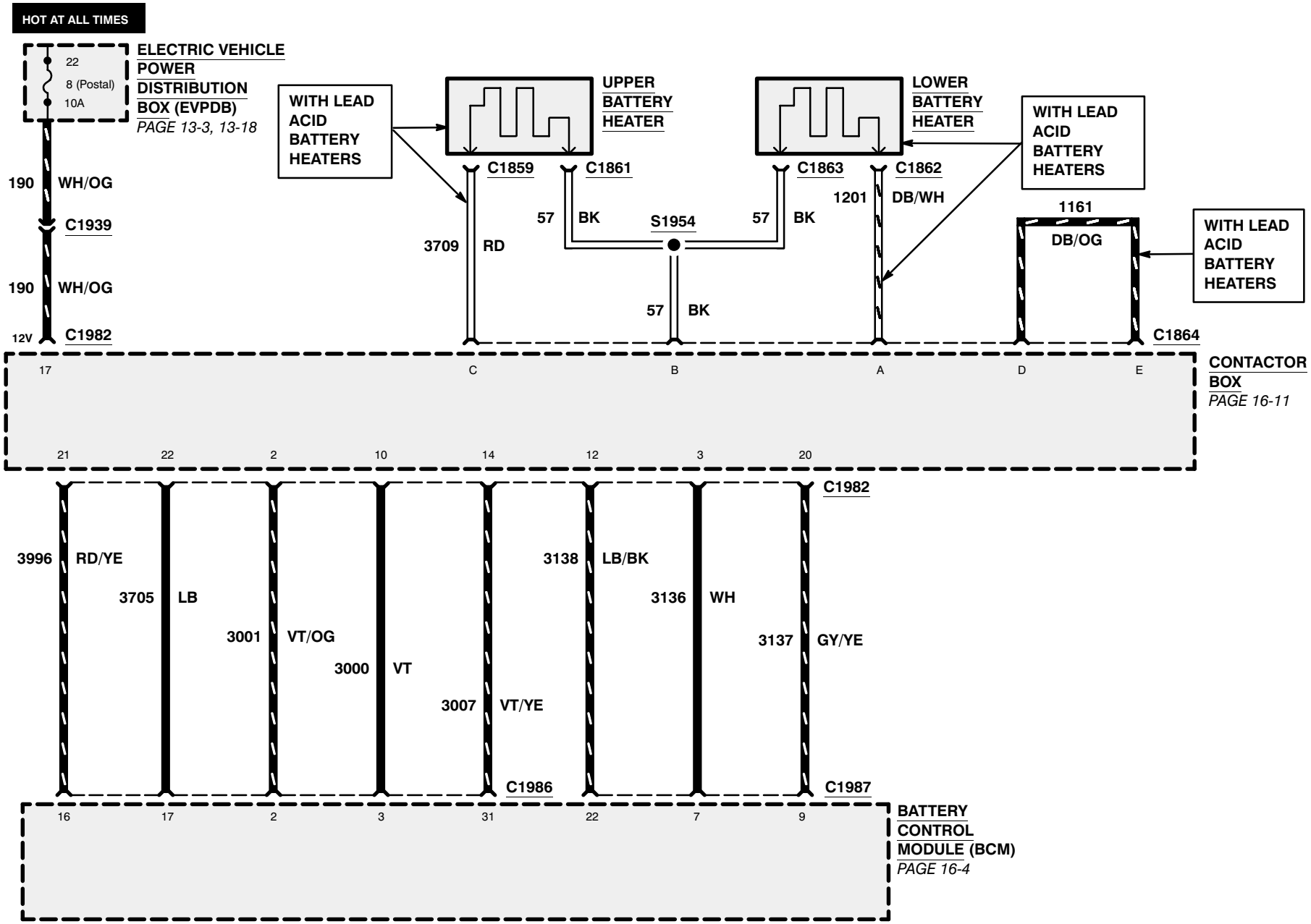


www.AUTOMOTIVEMECHANIC.org

18-1 TRACTION BATTERY CHARGING/HEATING SYSTEM



www.AUTOMOTIVEMECHANIC.org

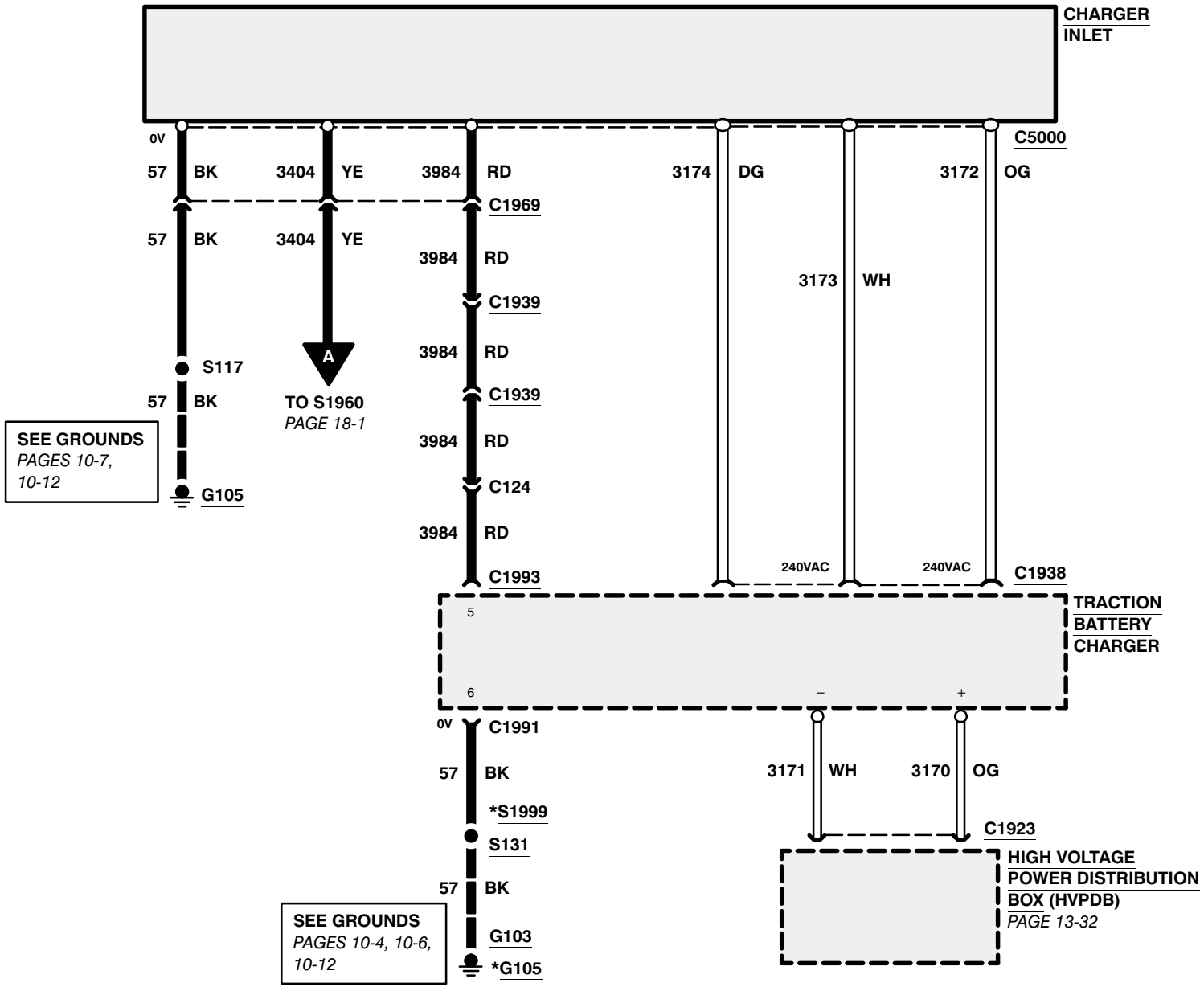


www.AUTOMOTIVEMECHANIC.ORG

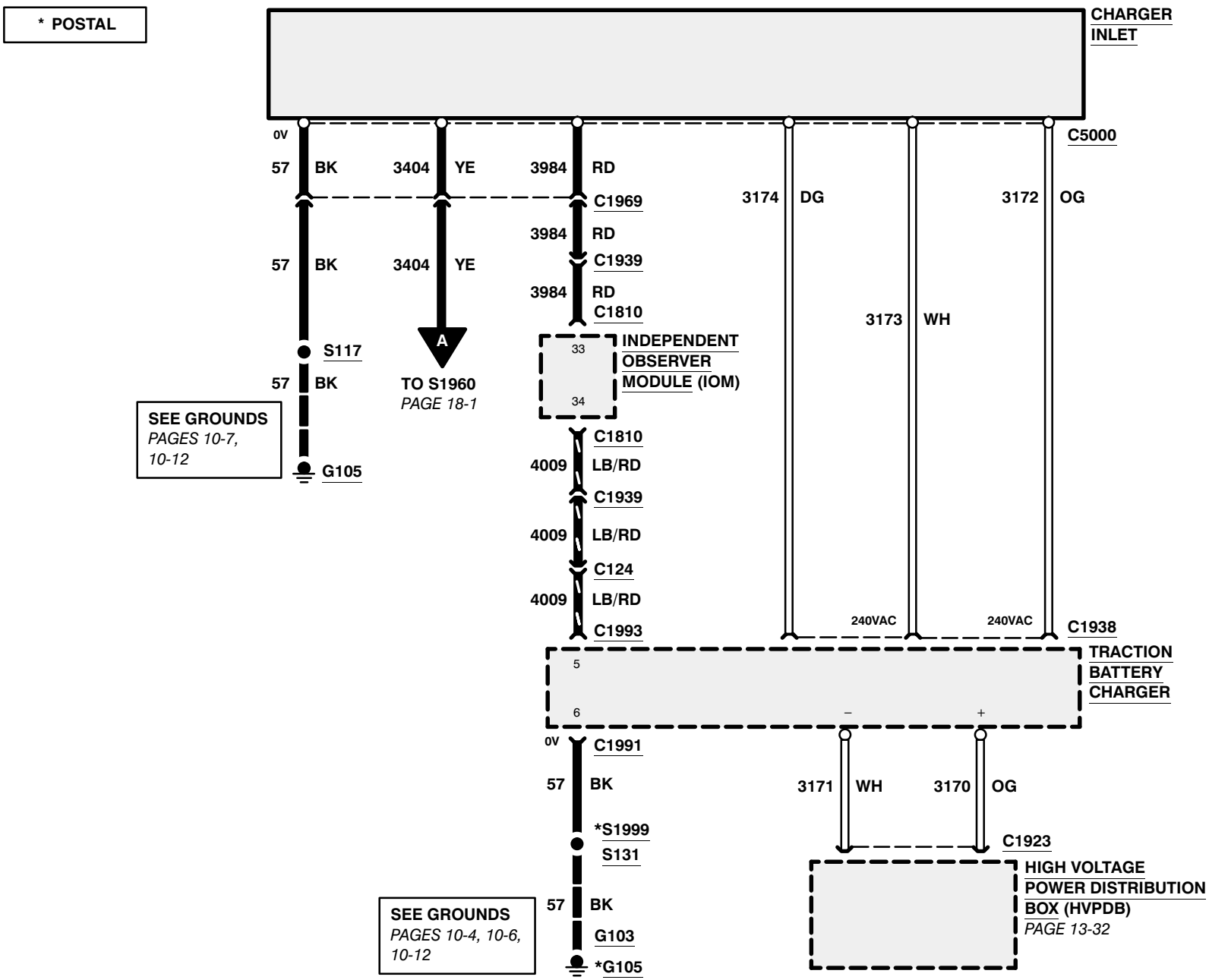
18-3 TRACTION BATTERY CHARGING/HEATING SYSTEM

* POSTAL

LEAD ACID



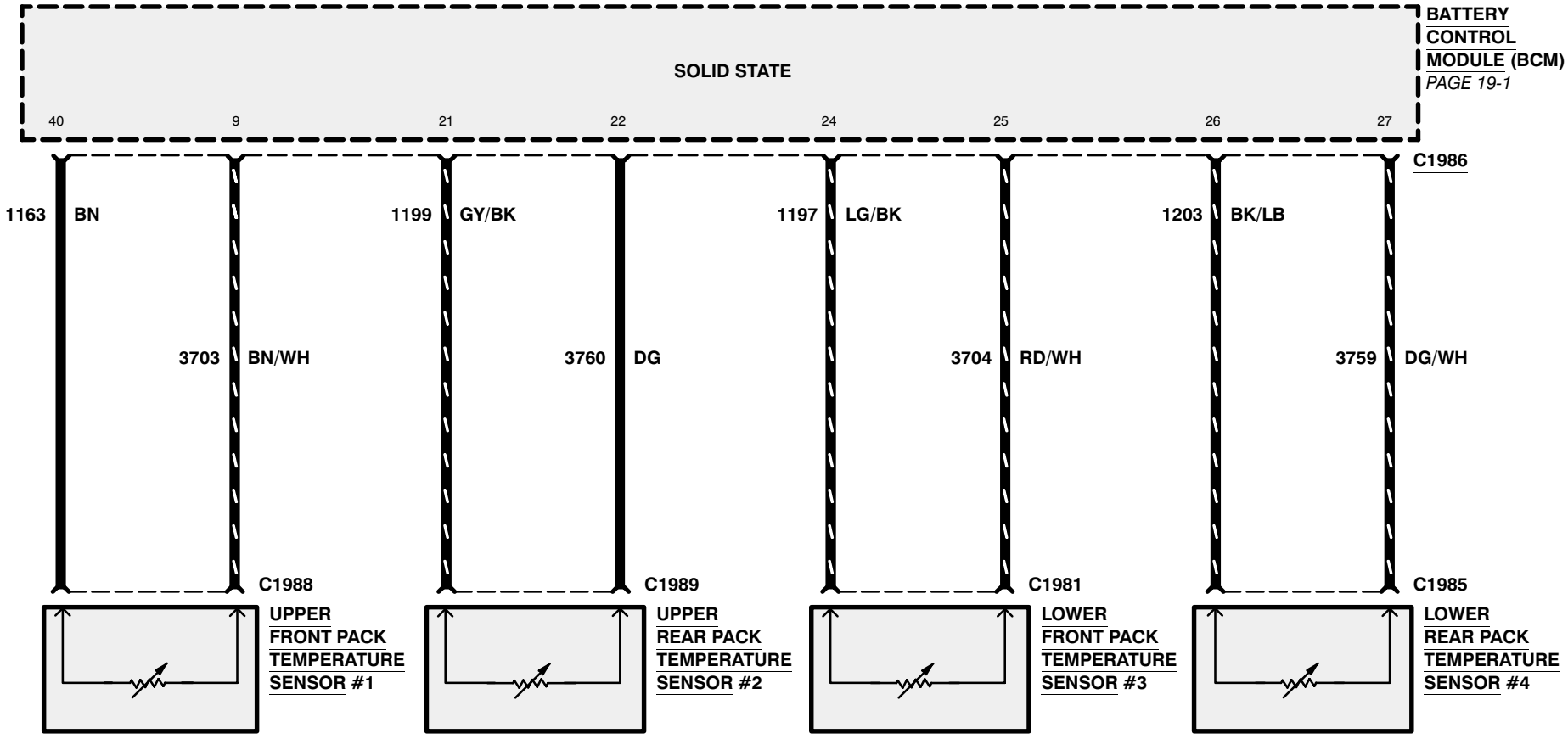
www.AUTOMOTIVEMECHANIC.ORG



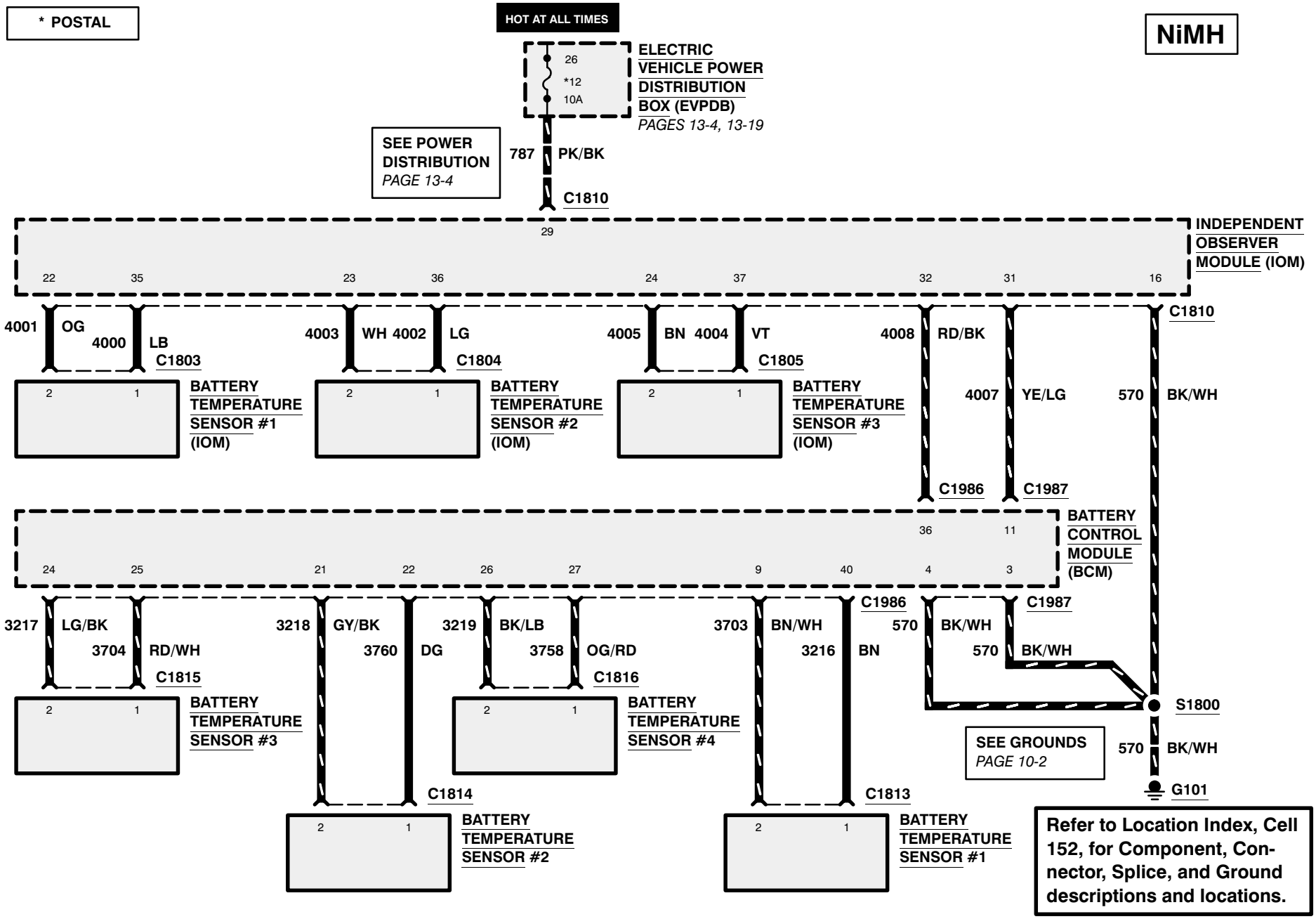
www.AUTOMOTIVEMECHANIC.ORG

18-5 TRACTION BATTERY CHARGING/HEATING SYSTEM

LEAD ACID



www.AUTOMOTIVEMECHANIC.ORG



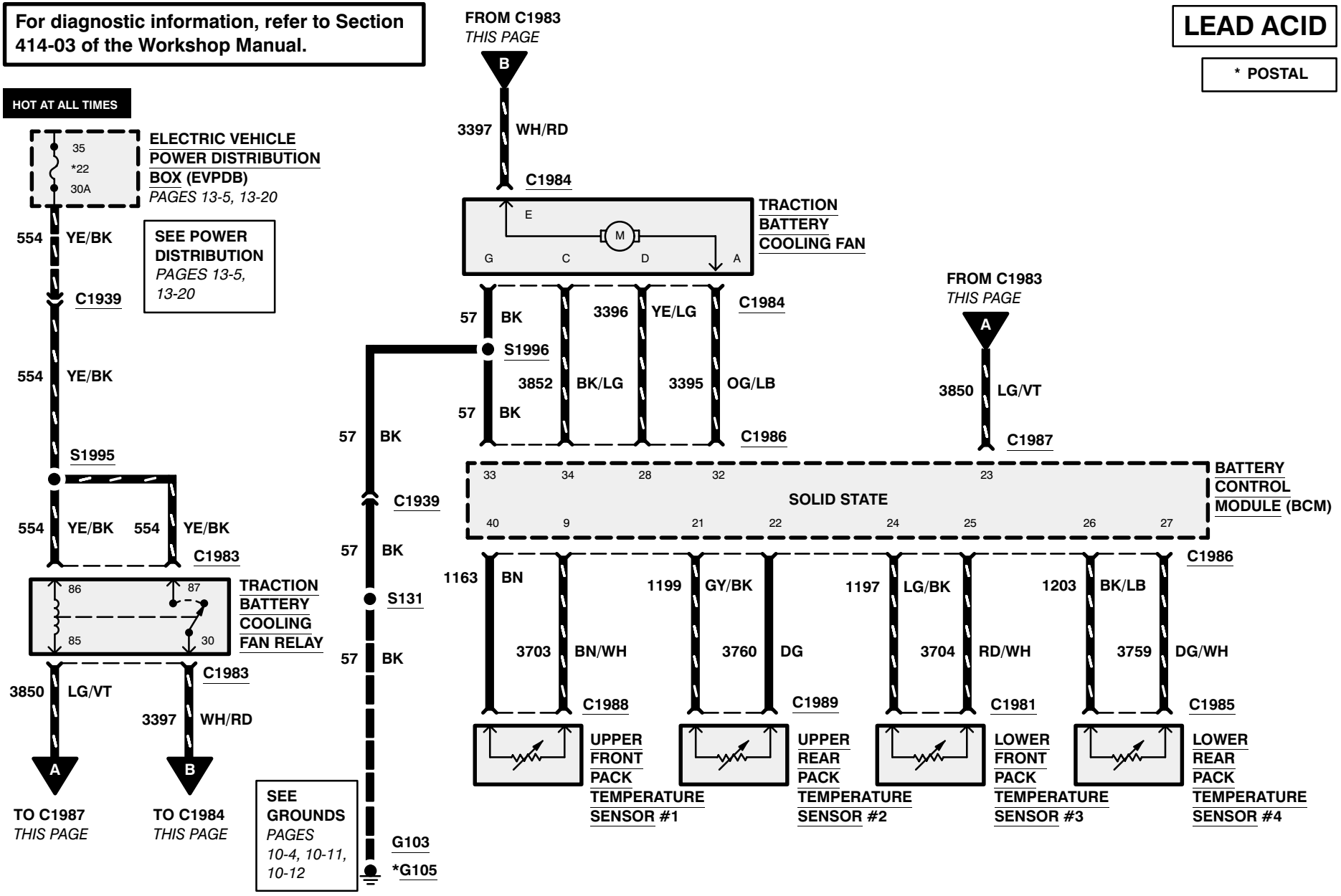
www.AUTOMOTIVEMECHANIC.org

19-1 TRACTION BATTERY COOLING/VENTILATION

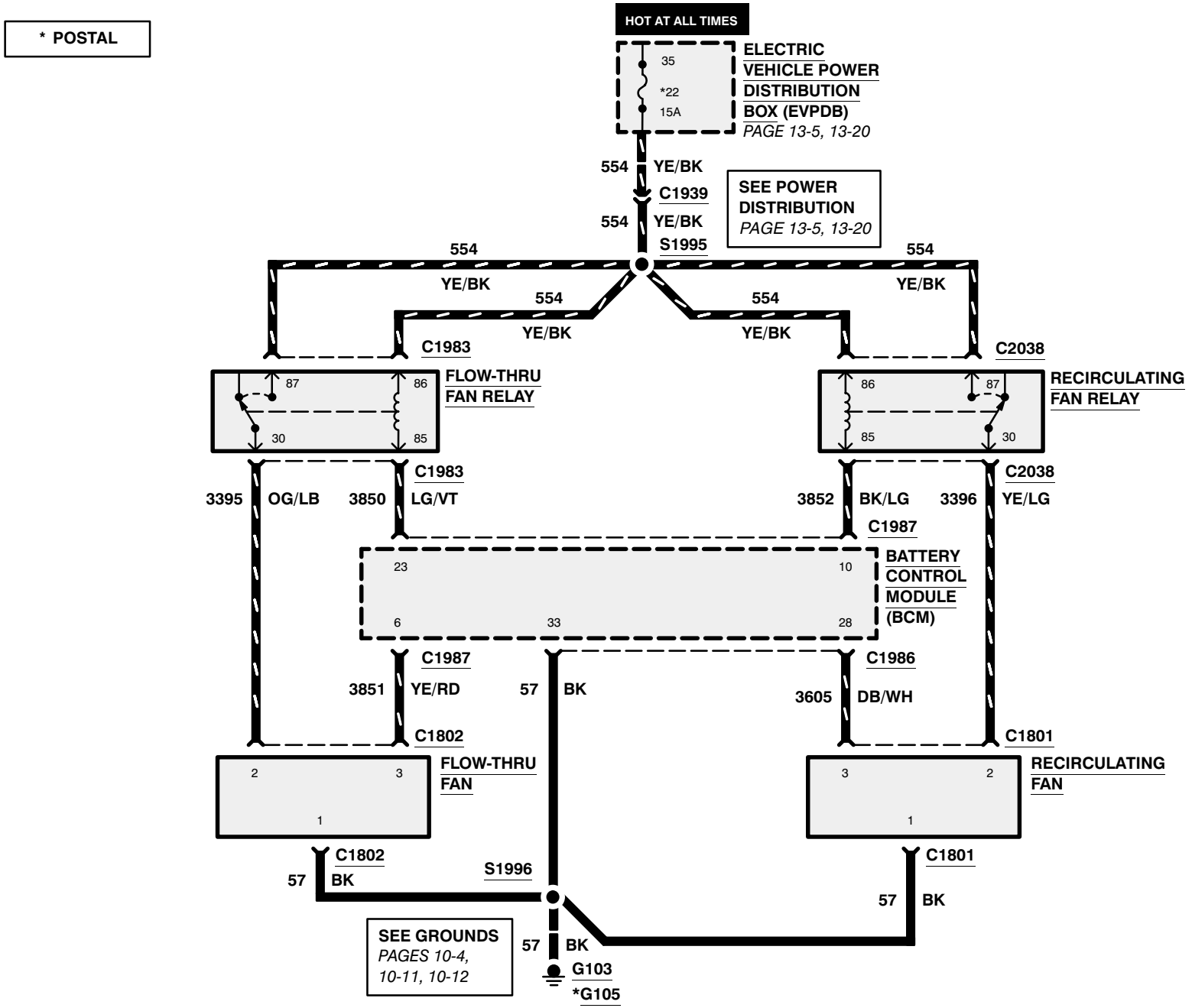
For diagnostic information, refer to Section 414-03 of the Workshop Manual.

LEAD ACID

*** POSTAL**



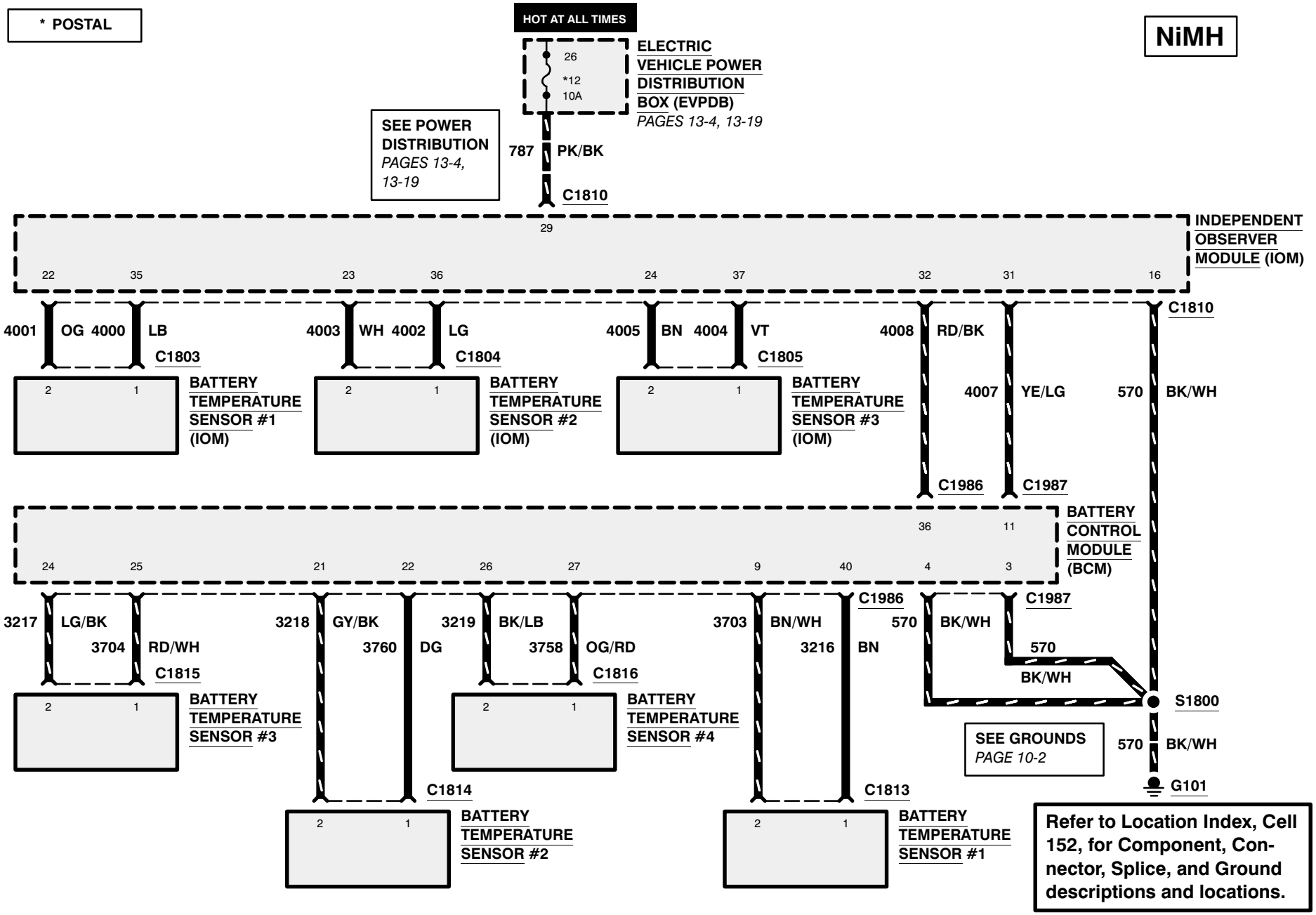
www.AUTOMOTIVEMECHANIC.org



www.AUTOMOTIVEMECHANIC.ORG

19-3 TRACTION BATTERY COOLING/VENTILATION

2001 RANGER ELECTRIC VEHICLE



www.AUTOMOTIVEMECHANIC.ORG

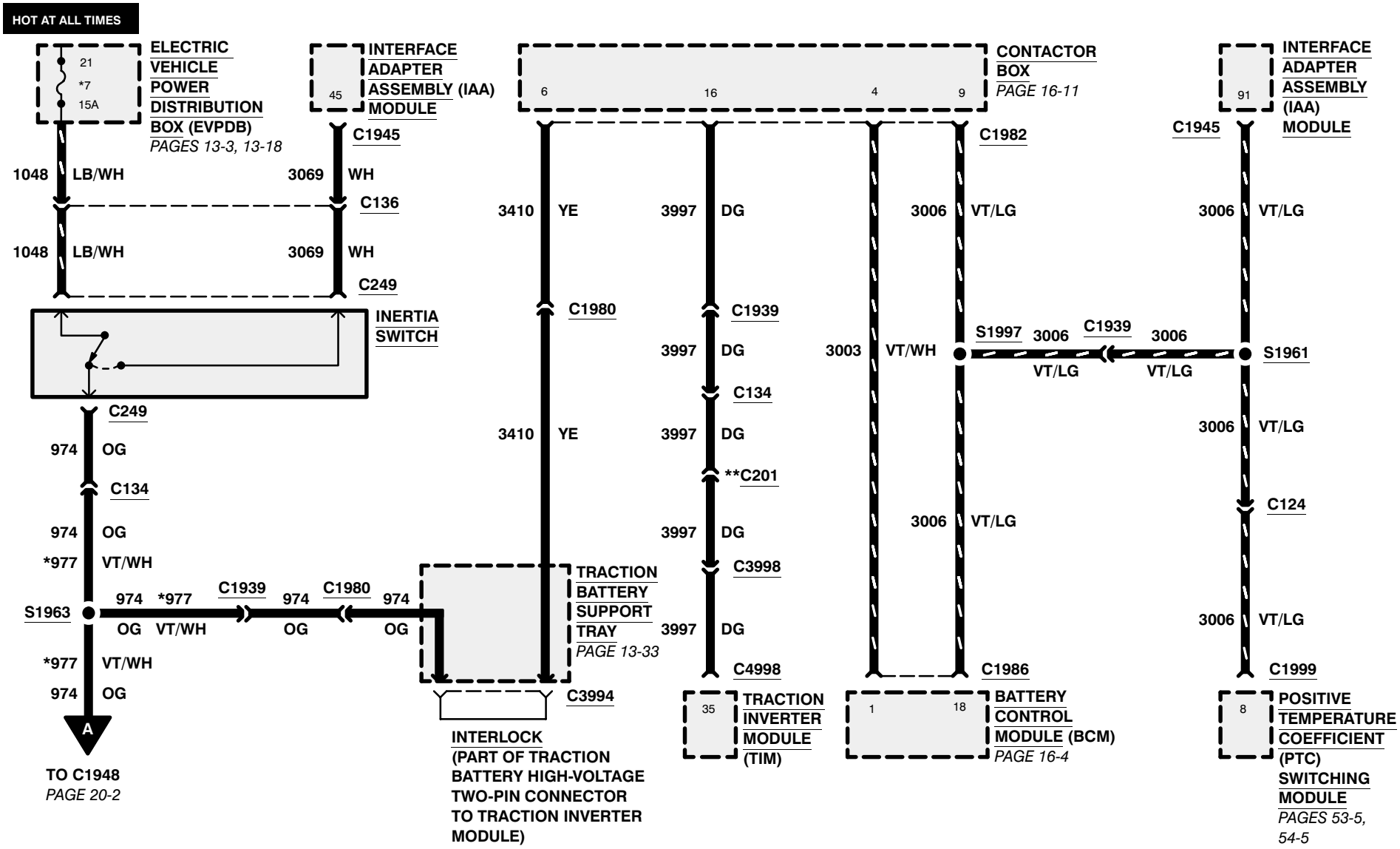
www.AUTOMOTIVEMECHANIC.org

20-1 EMERGENCY POWER OFF (EPO)/INTERLOCK SYSTEM

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 414-03 of the Workshop Manual.

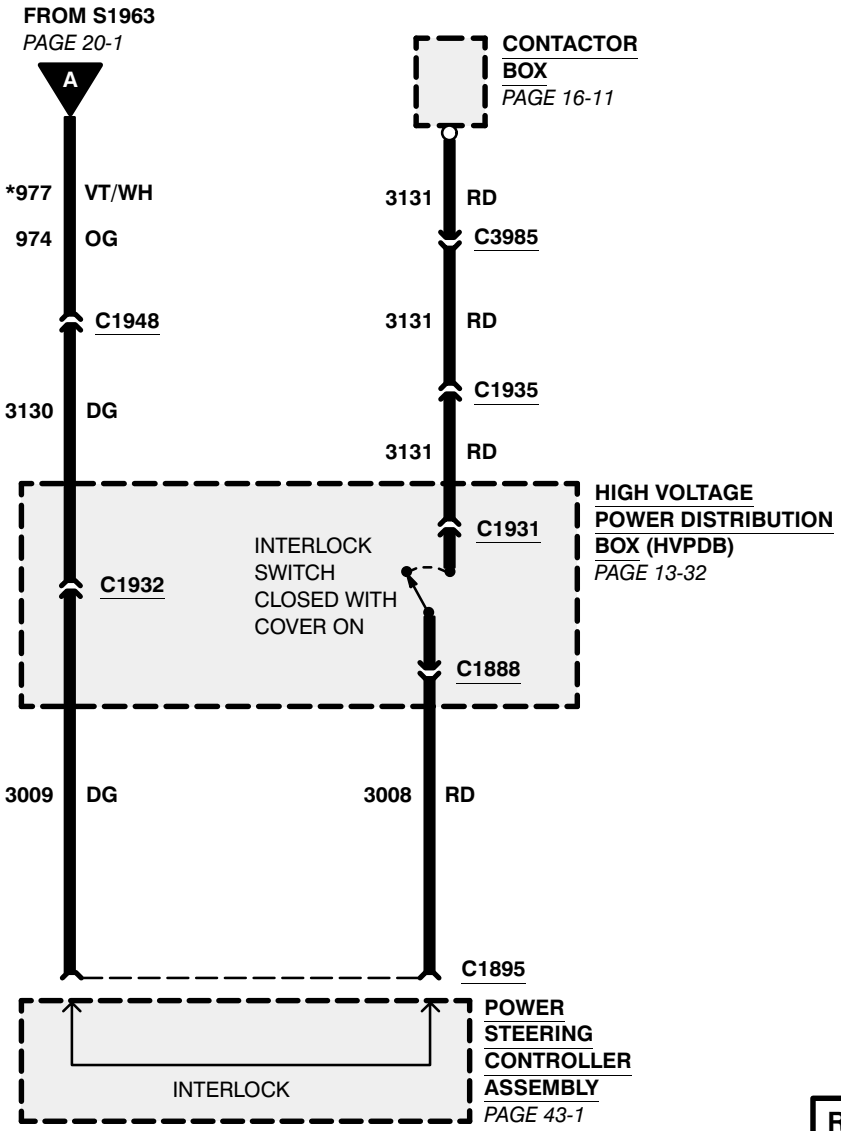
* POSTAL
** EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

EMERGENCY POWER OFF (EPO)/INTERLOCK SYSTEM 20-2

* POSTAL



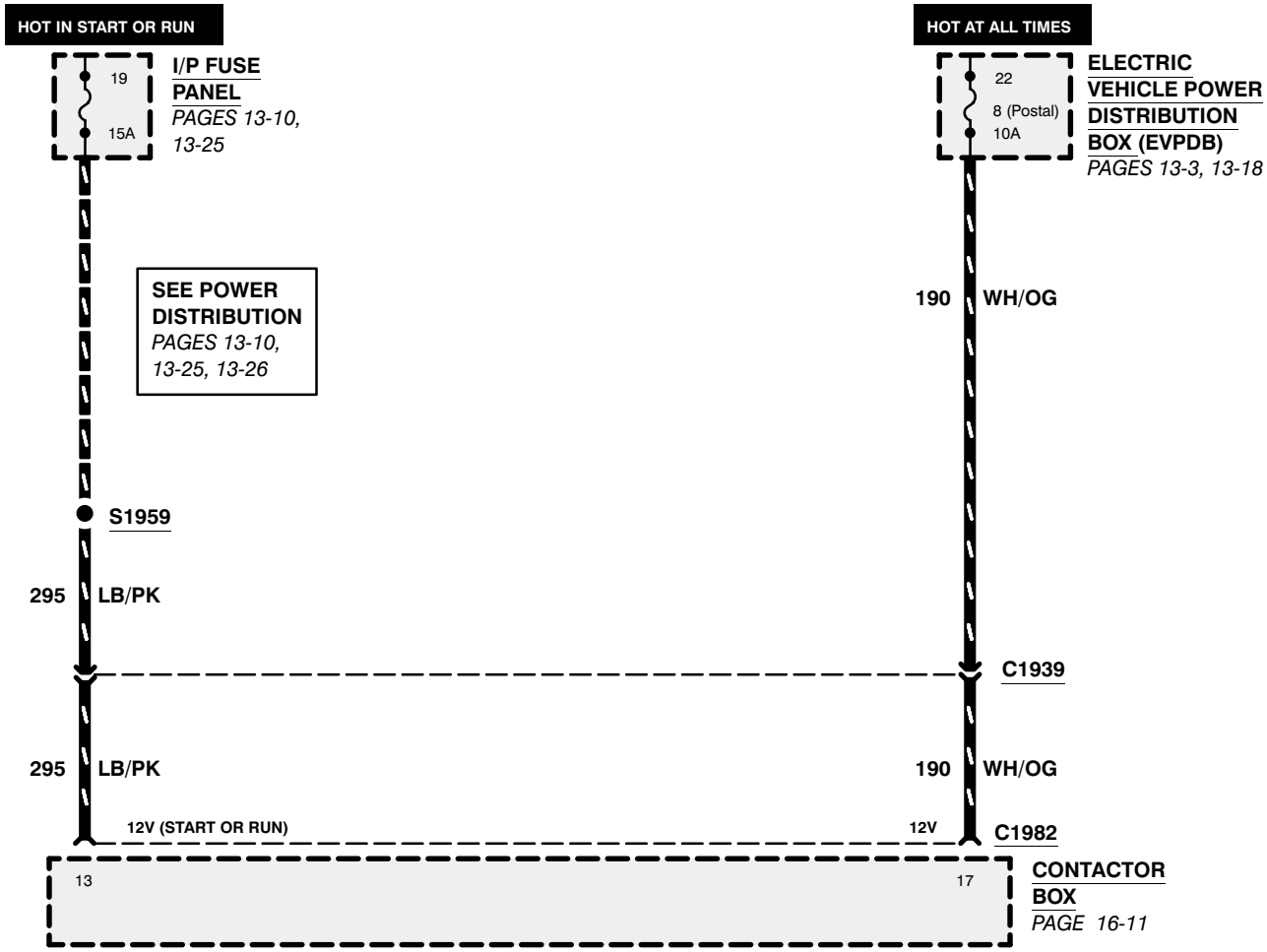
Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

www.AUTOMOTIVE MECHANIC.ORG

21-1 CONTACTOR BOX RELAY CONTROL

2001 RANGER ELECTRIC VEHICLE

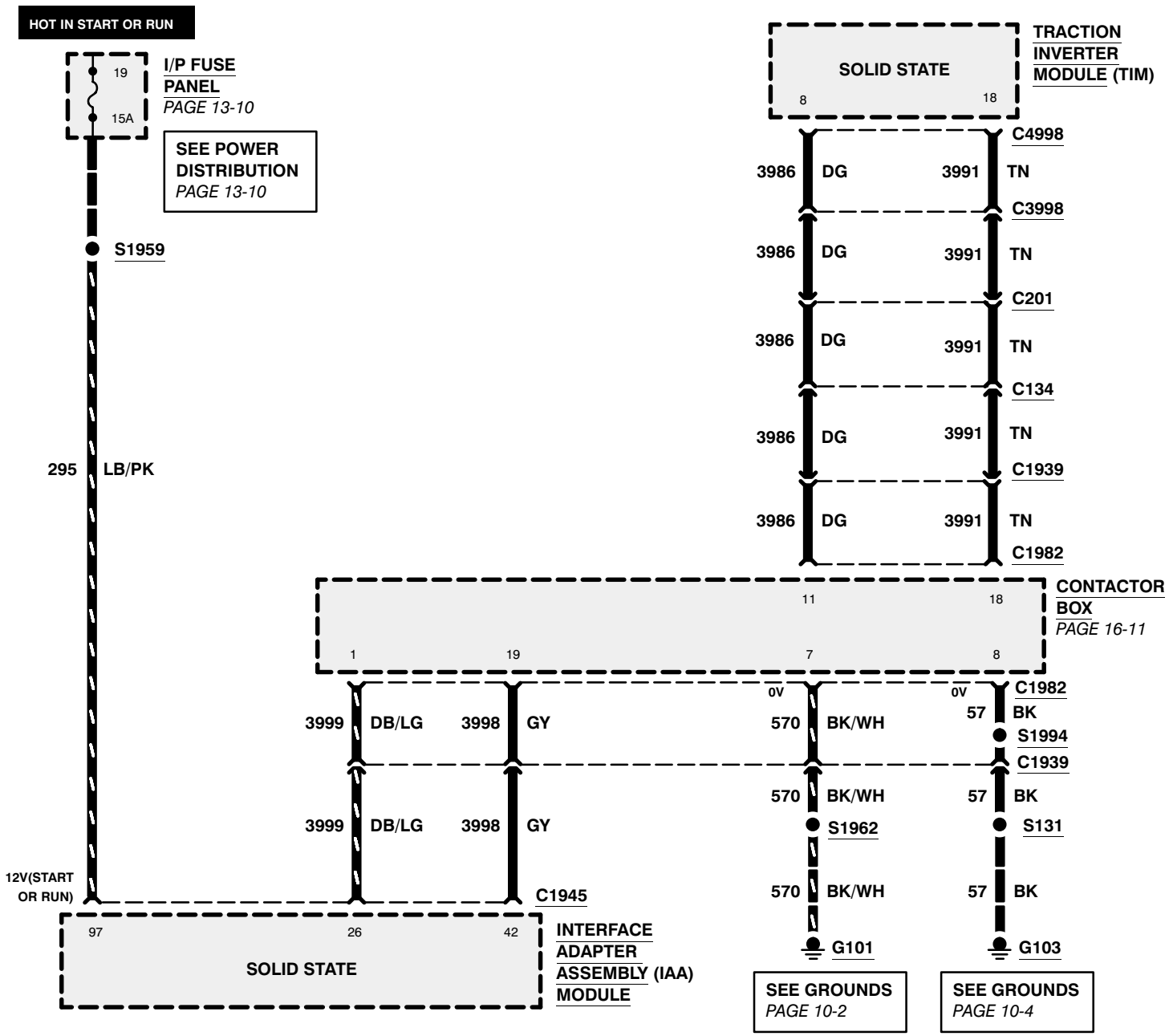
For diagnostic information, refer to Section 418-06 of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.ORG

CONTACTOR BOX RELAY CONTROL 21-2

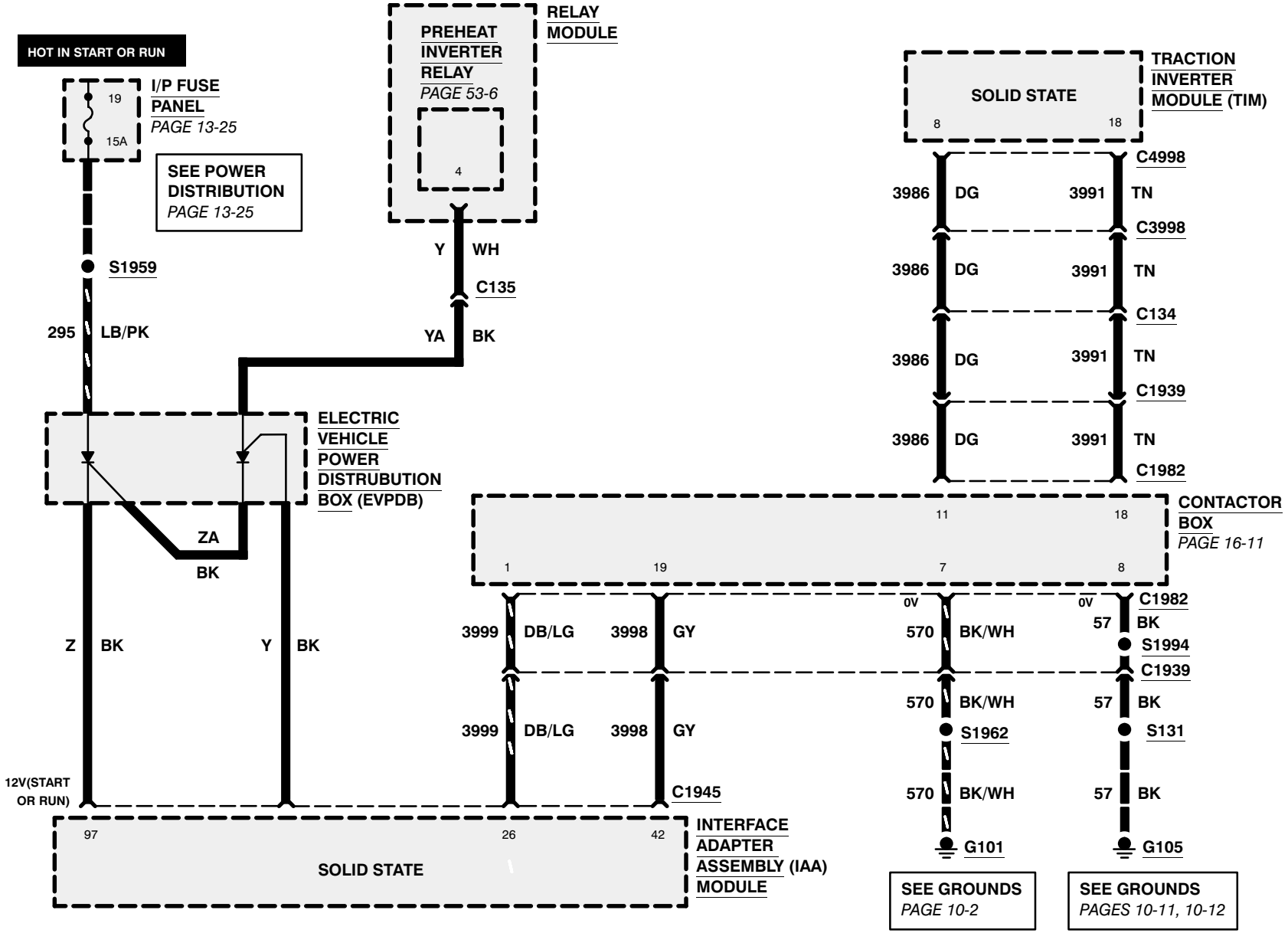
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

21-3 CONTACTOR BOX RELAY CONTROL

POSTAL

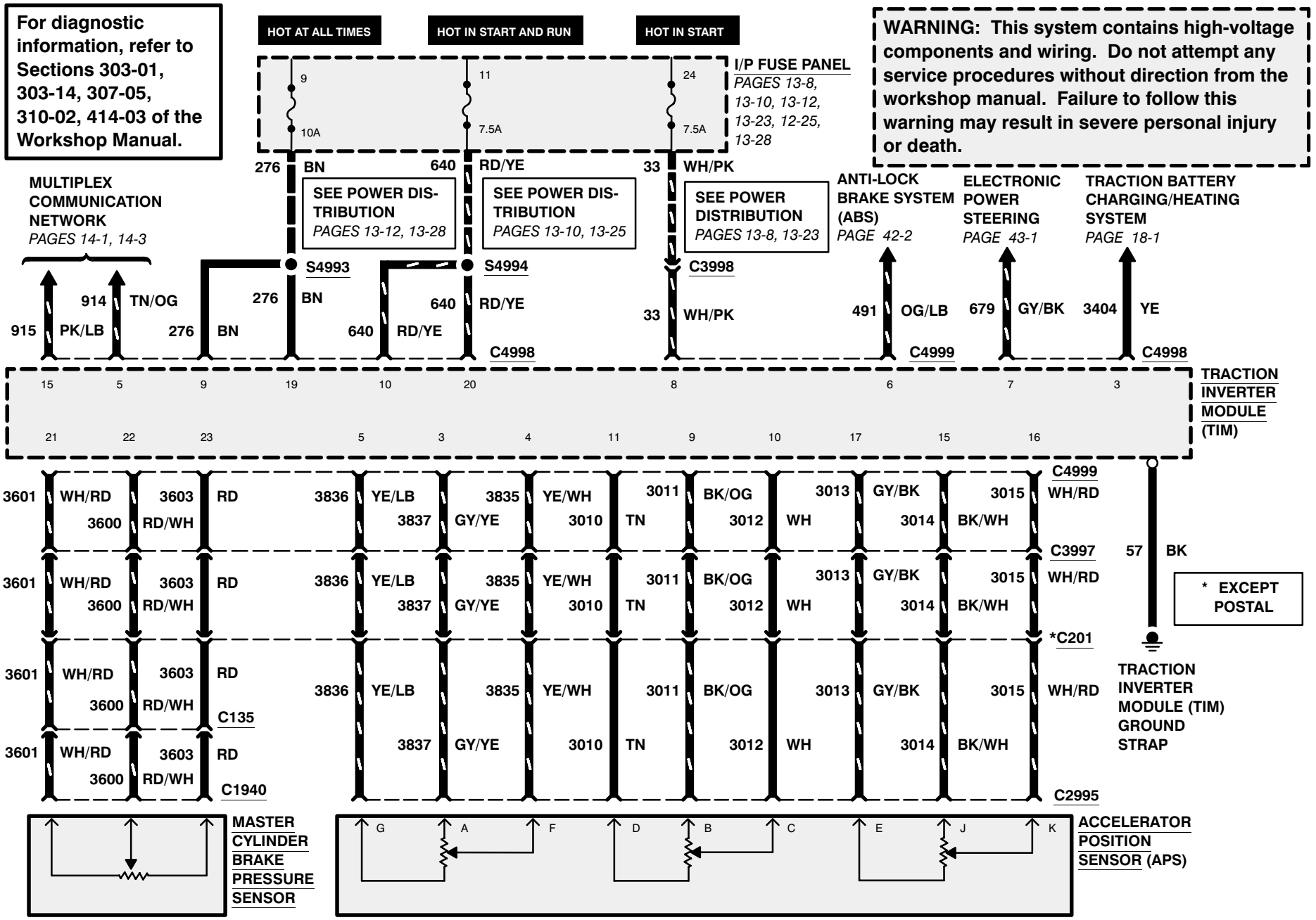


www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVEMECHANIC.org

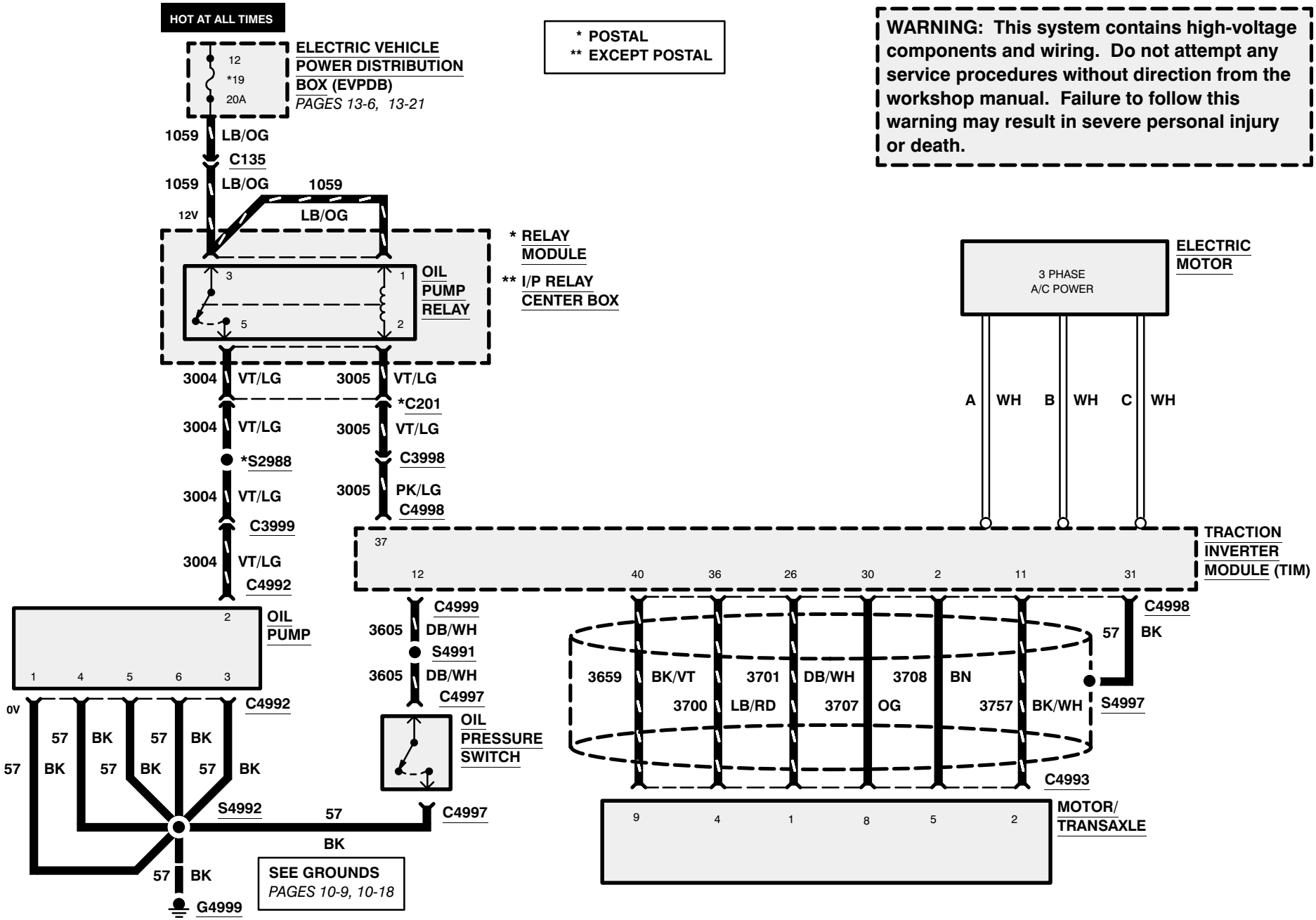
26-1 MOTOR/TRANSAXLE CONTROL

2001 RANGER ELECTRIC VEHICLE



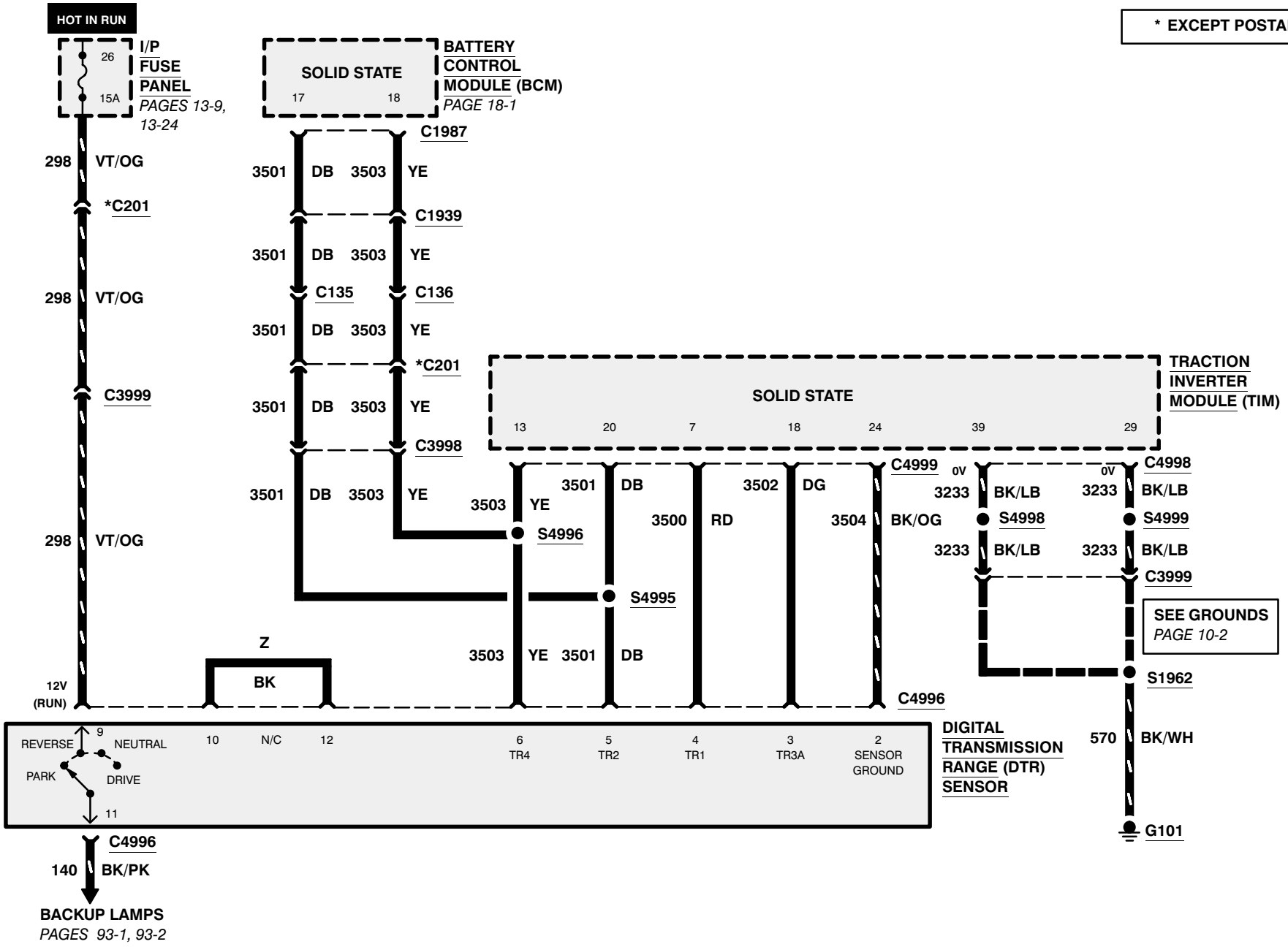
www.AUTOMOTIVEMECHANIC.org

MOTOR/TRANSAXLE CONTROL 26-2

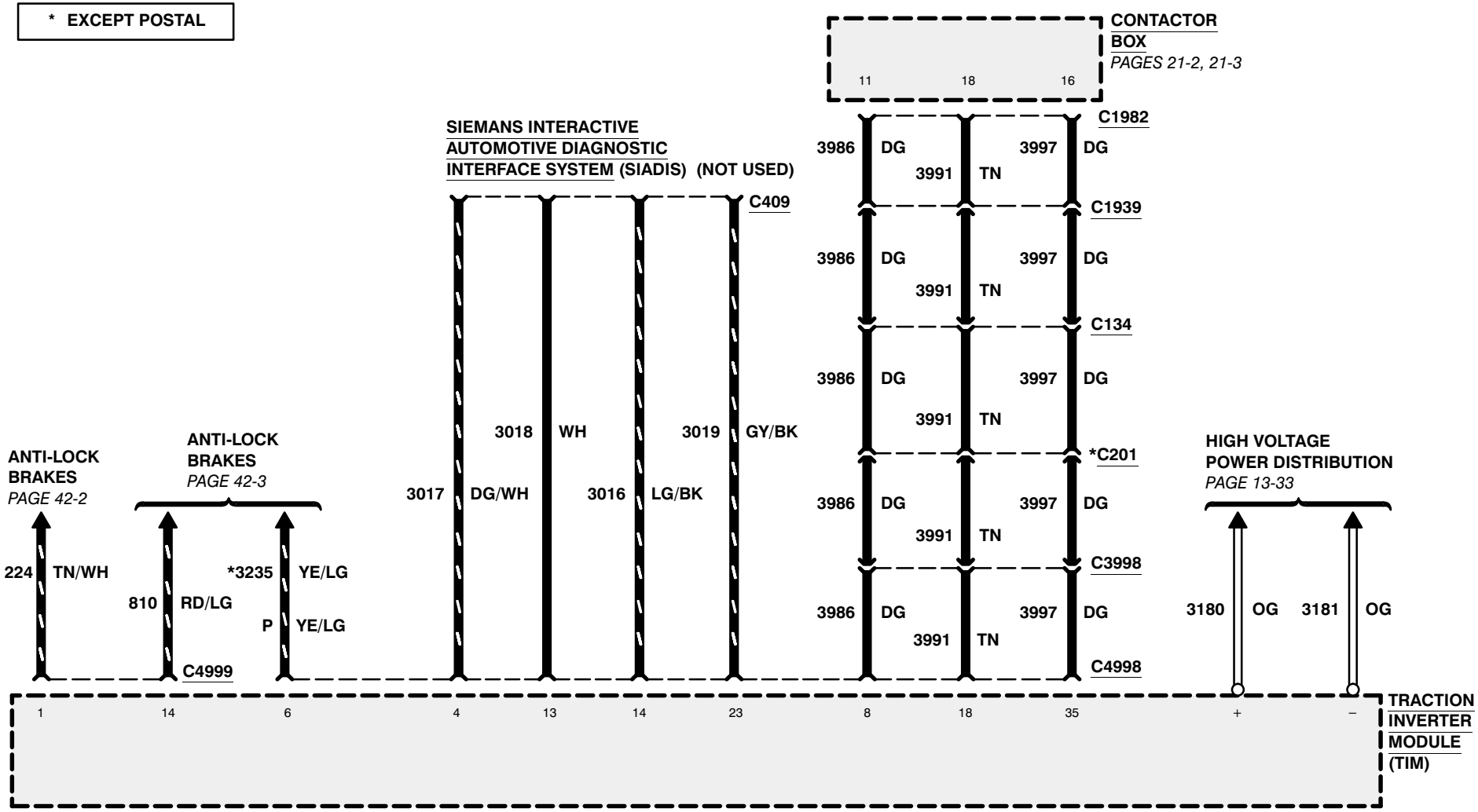


www.AUTOMOTIVEMECHANIC.org

26-3 MOTOR/TRANSAXLE CONTROL



www.AUTOMOTIVEMECHANIC.ORG



WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

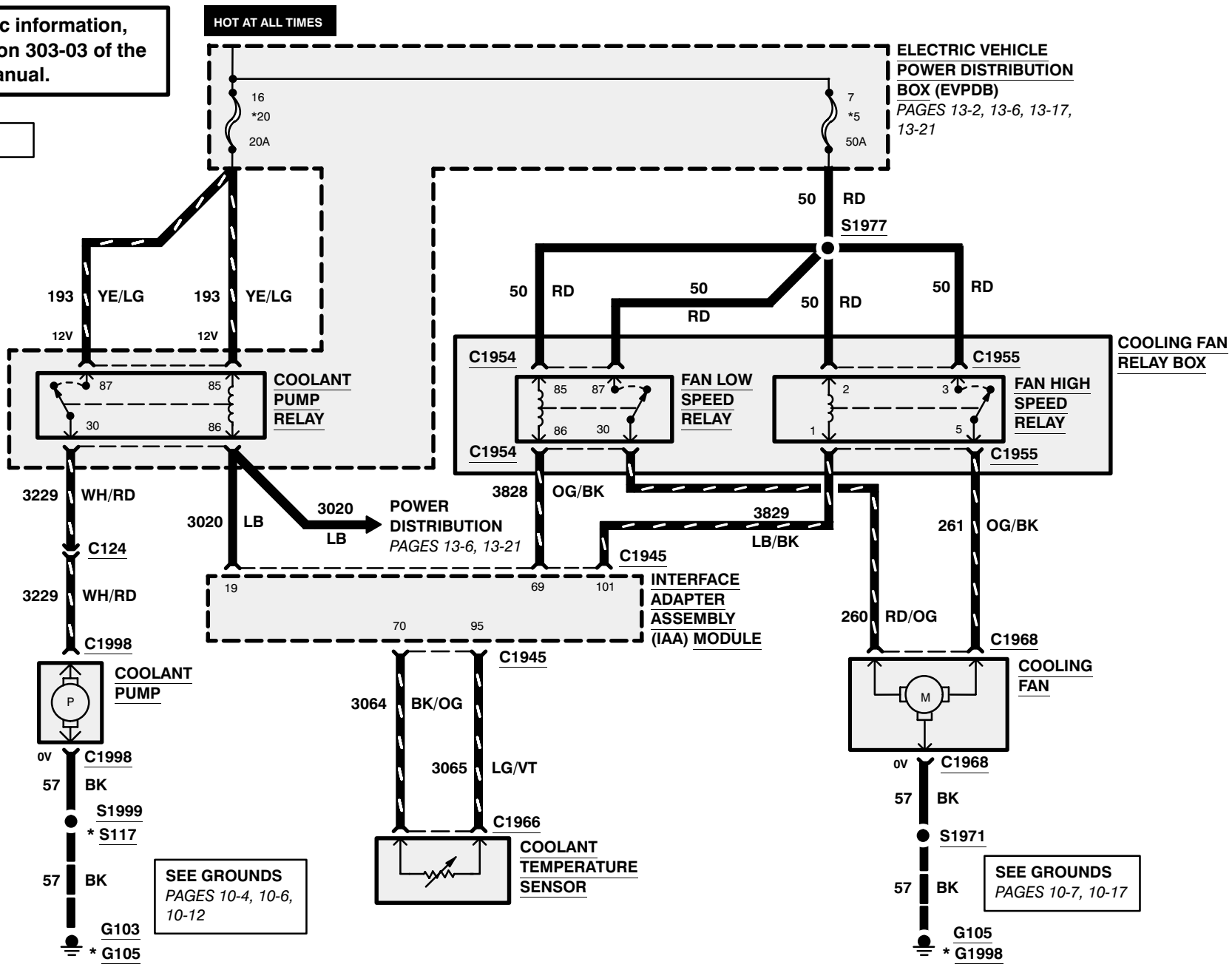
www.AUTOMOTIVEMECHANIC.org

33-1 COOLING SYSTEM

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 303-03 of the Workshop Manual.

*** POSTAL**



www.AUTOMOTIVEMECHANIC.ORG

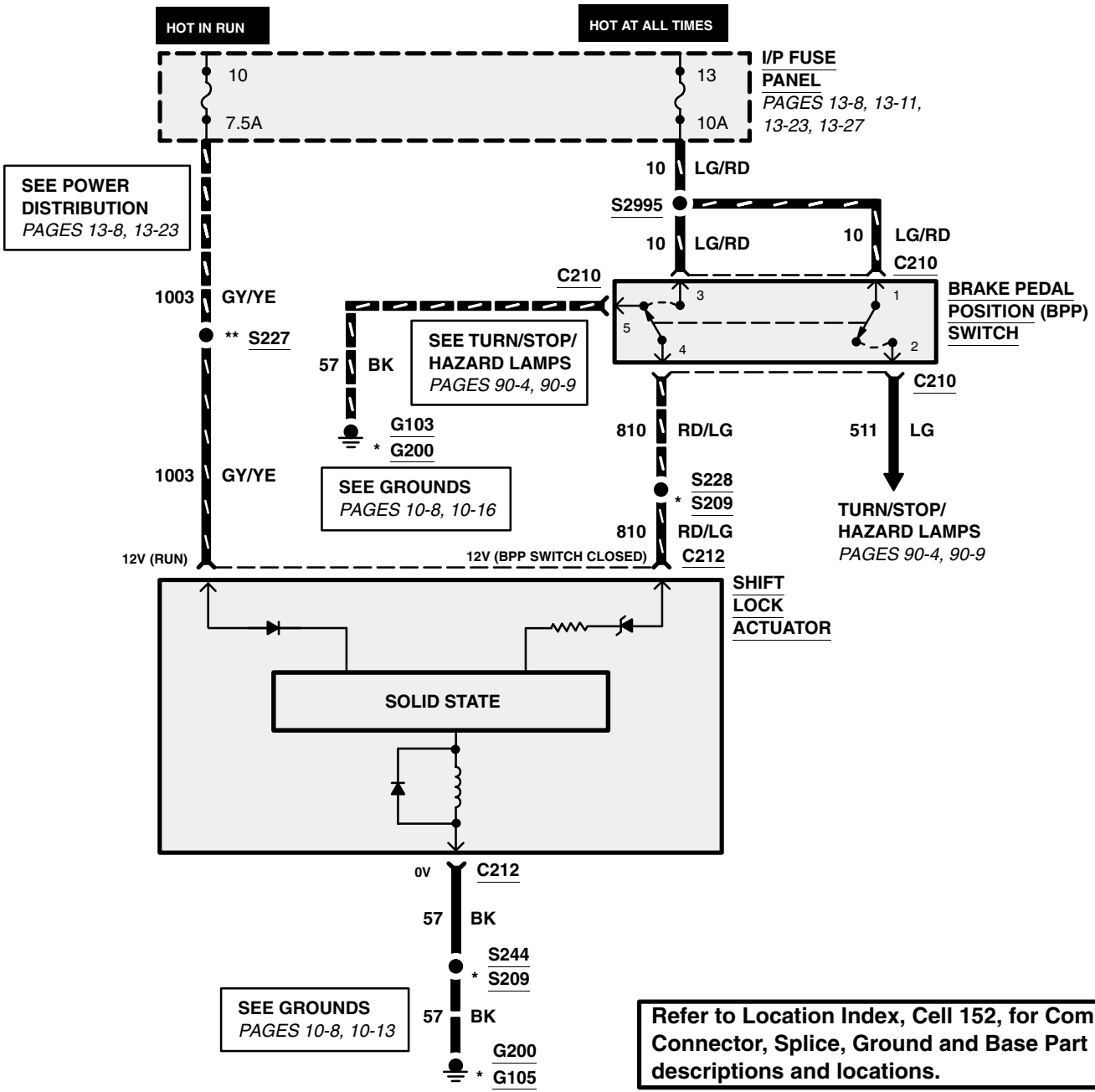
www.AUTOMOTIVEMECHANIC.ORG

37-1 SHIFT LOCK

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 307-05 of the Workshop Manual.

* POSTAL
** EXCEPT POSTAL



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

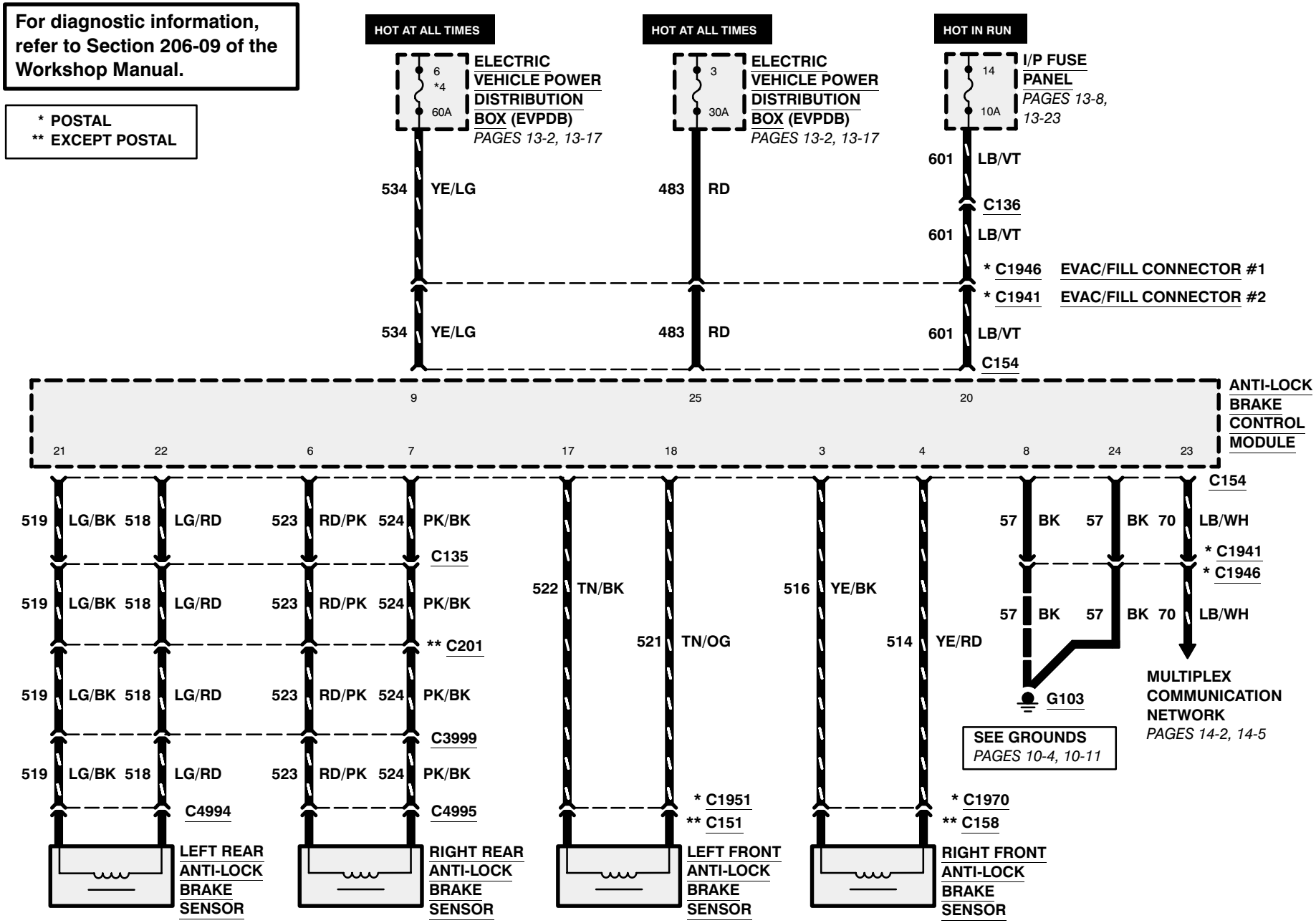
www.AUTOMOTIVEMECHANIC.org

42-1 ANTI-LOCK BRAKE SYSTEM (ABS)

2001 RANGER ELECTRIC VEHICLE

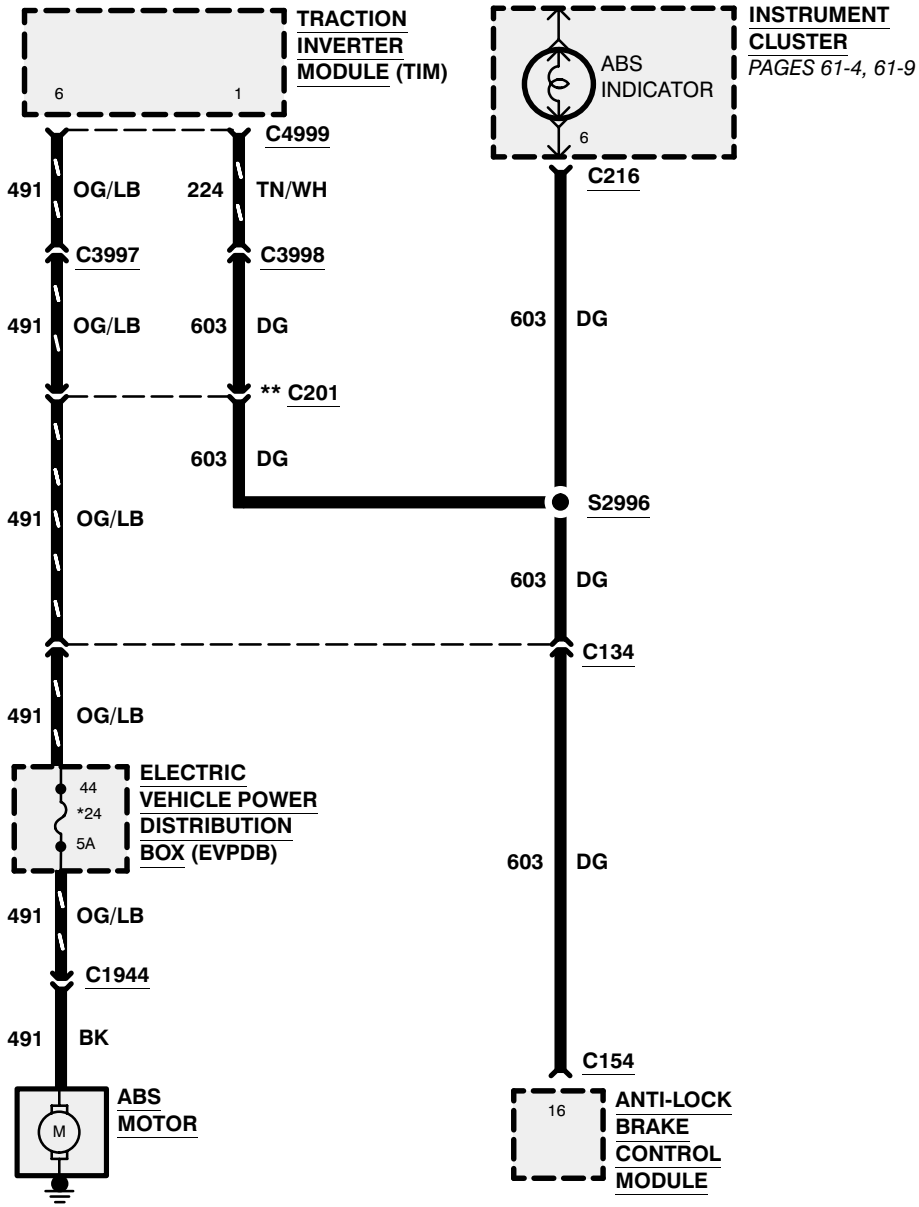
For diagnostic information, refer to Section 206-09 of the Workshop Manual.

* POSTAL
** EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

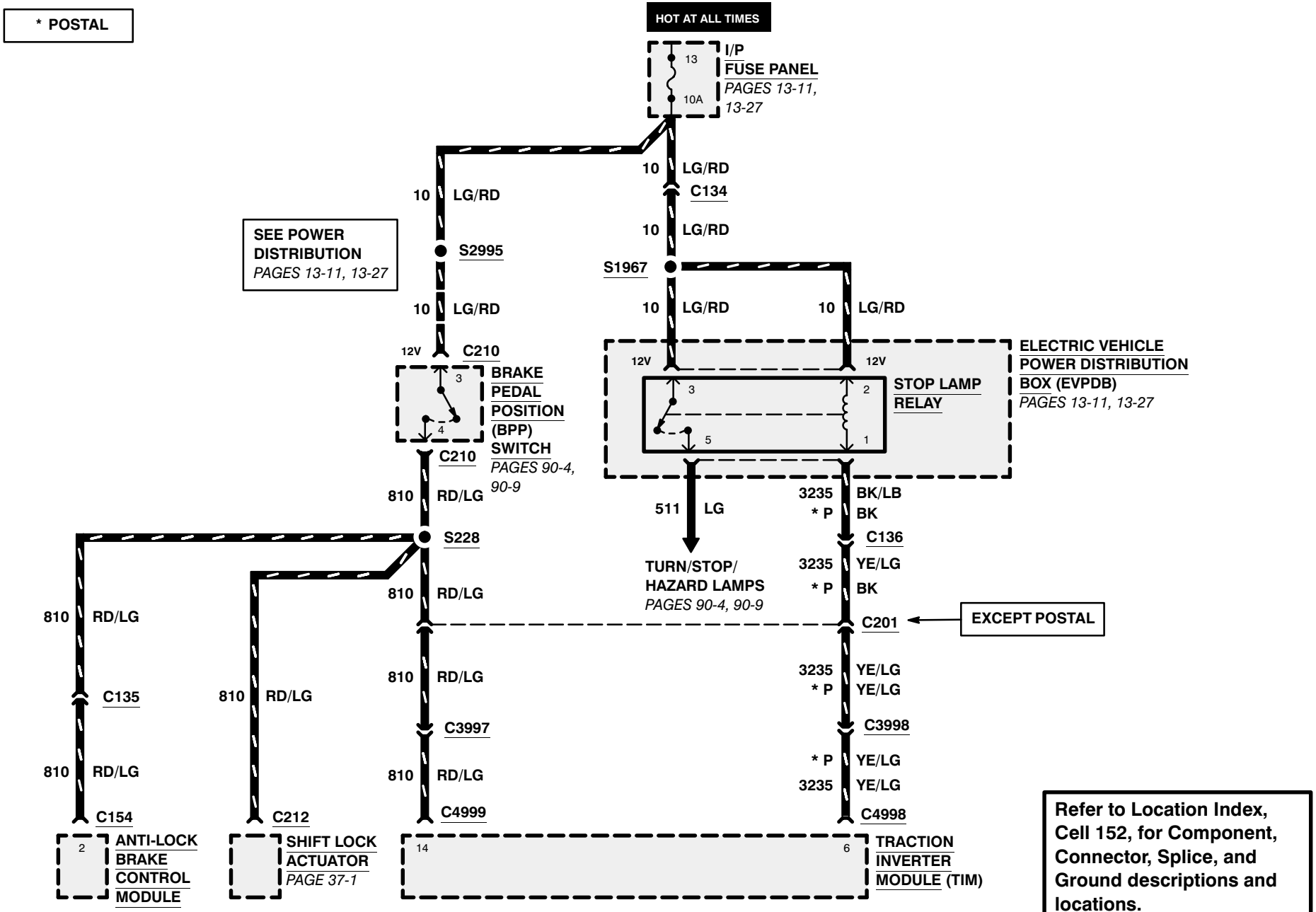
* POSTAL
** EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

42-3 ANTI-LOCK BRAKE SYSTEM (ABS)

2001 RANGER ELECTRIC VEHICLE



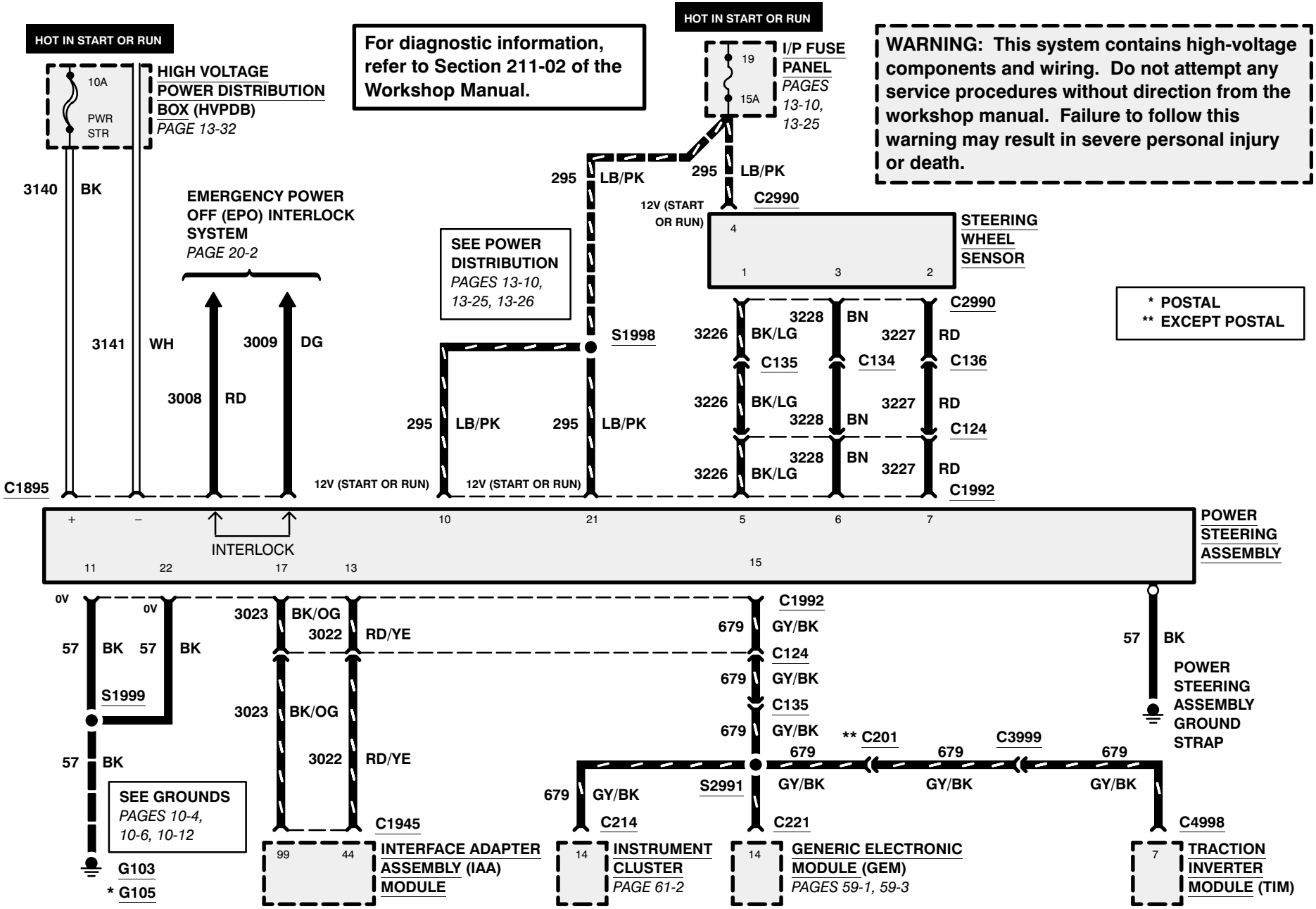
Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

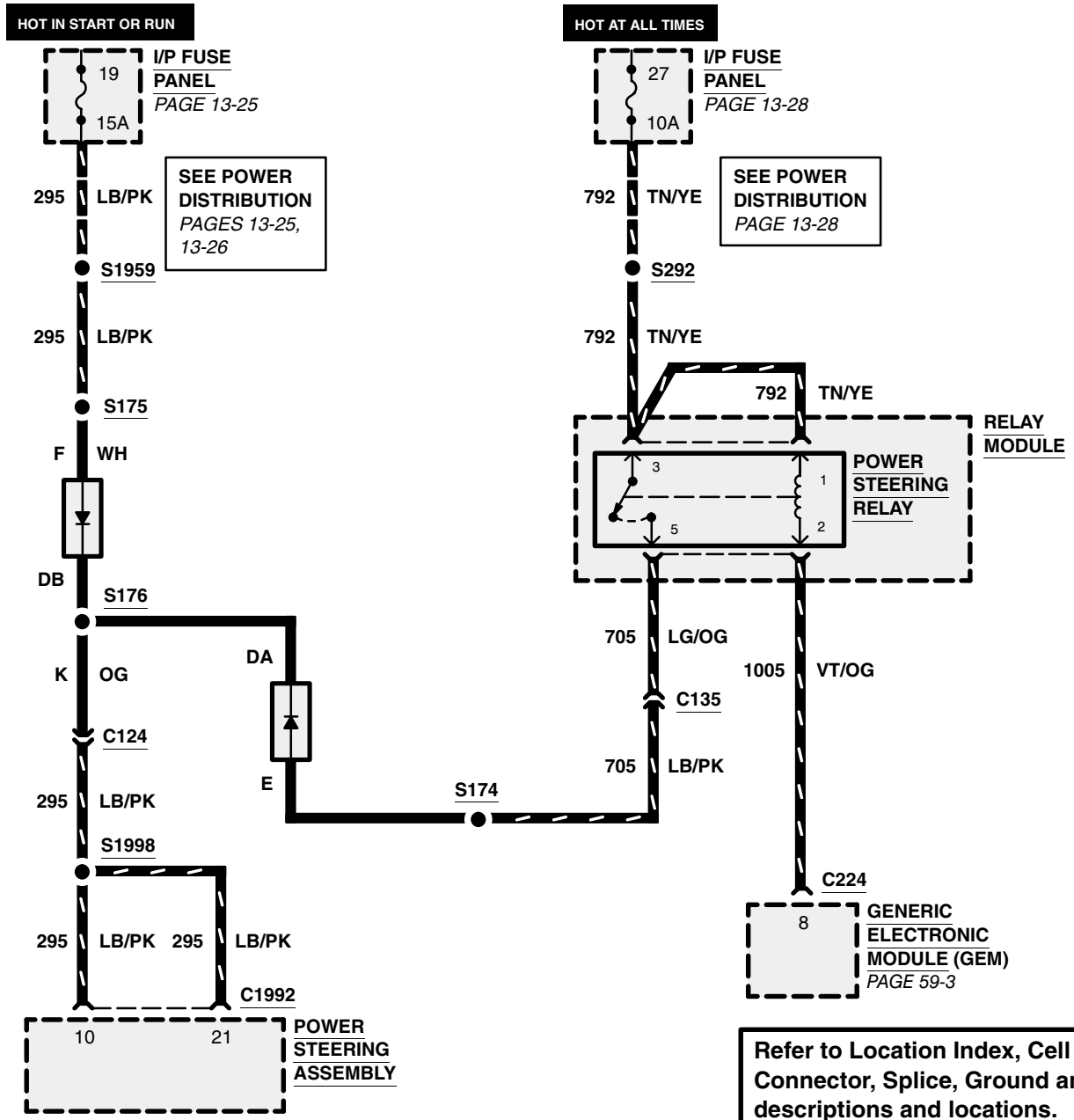
43-1 ELECTRONIC POWER STEERING

2001 RANGER ELECTRIC VEHICLE



www.AUTOMOTIVEMECHANIC.org

POSTAL

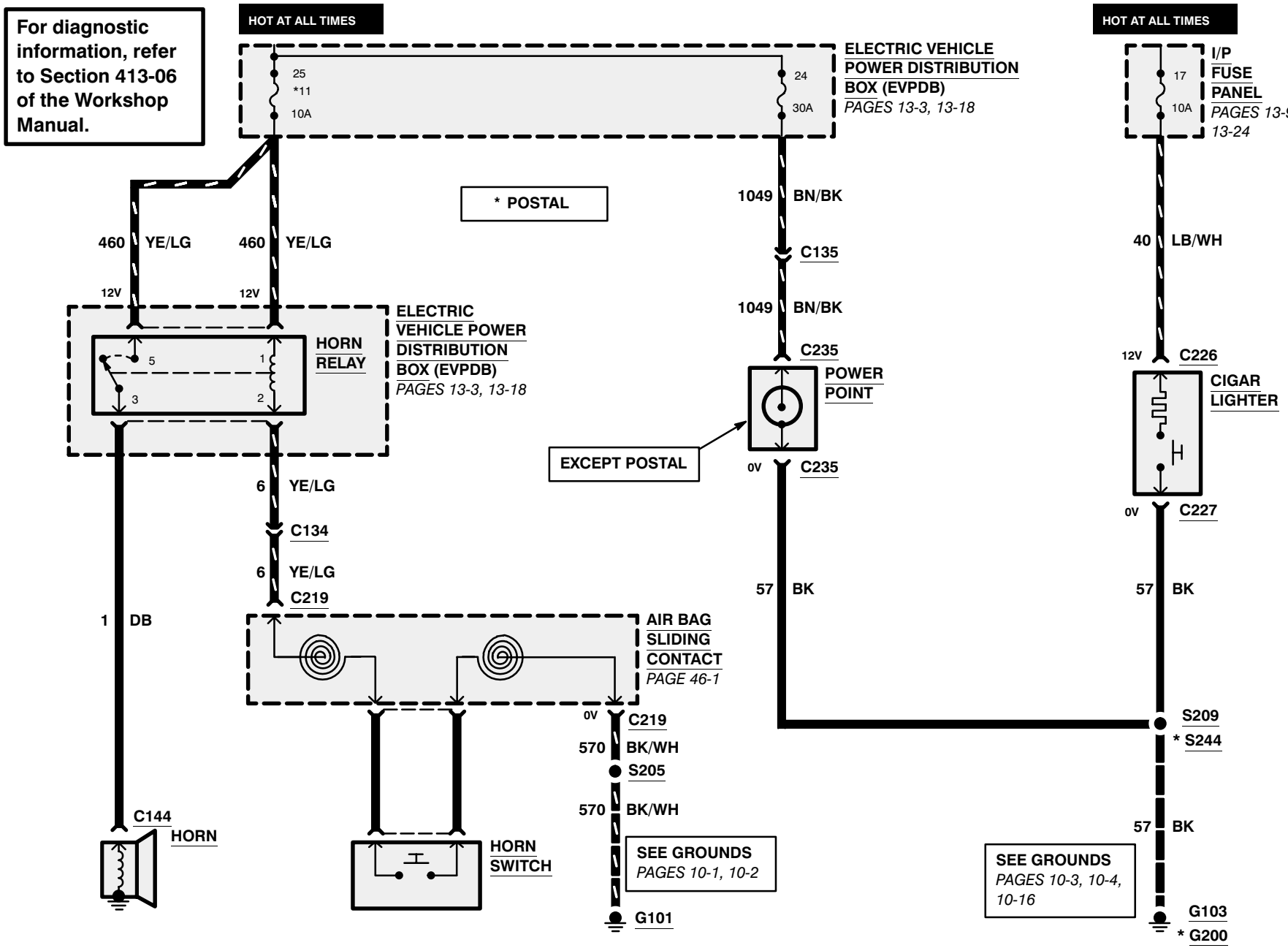


Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVE MECHANIC.ORG

44-1 HORN/CIGAR LIGHTER

2001 RANGER ELECTRIC VEHICLE



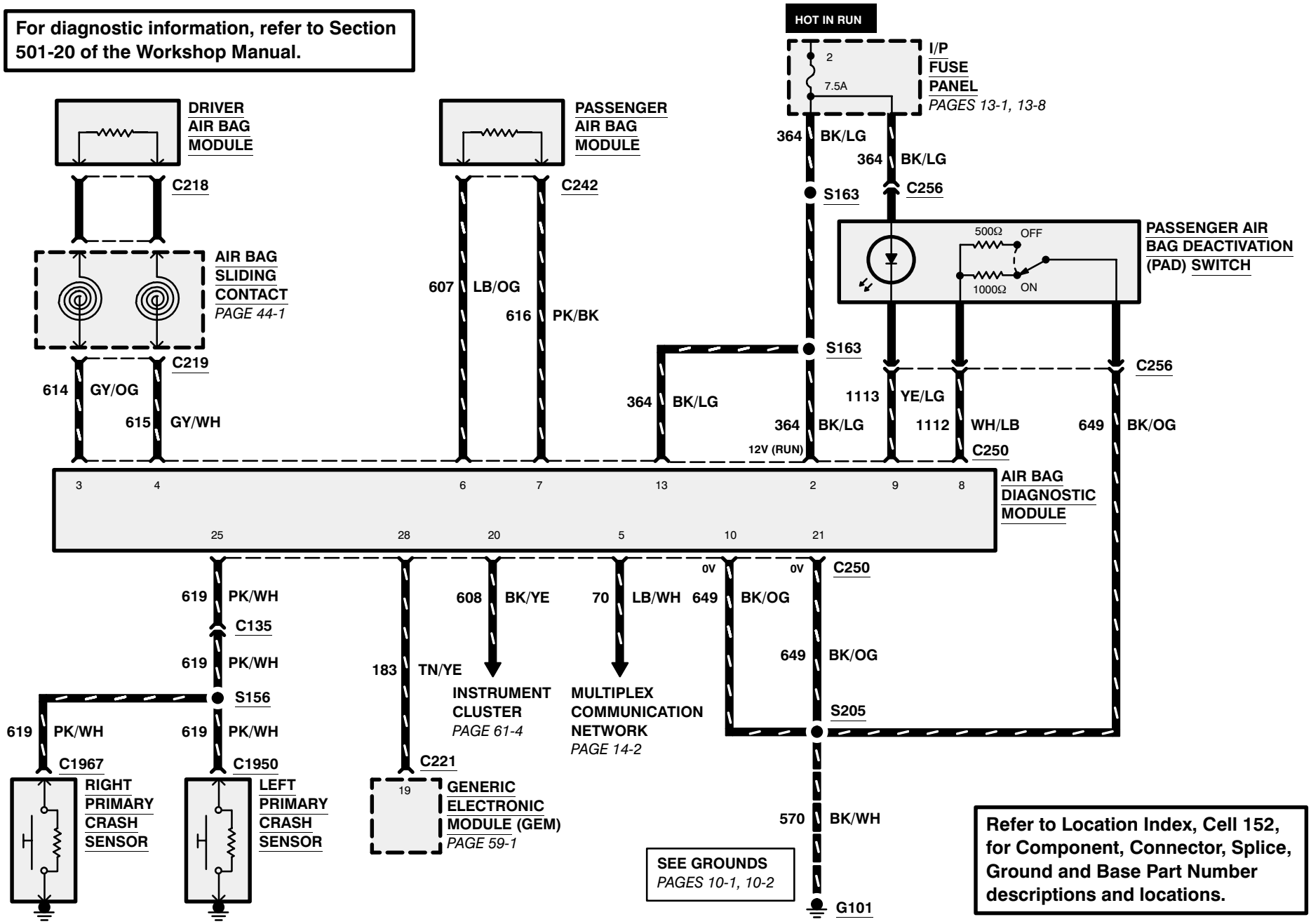
www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

46-1 AIR BAG RESTRAINT SYSTEM

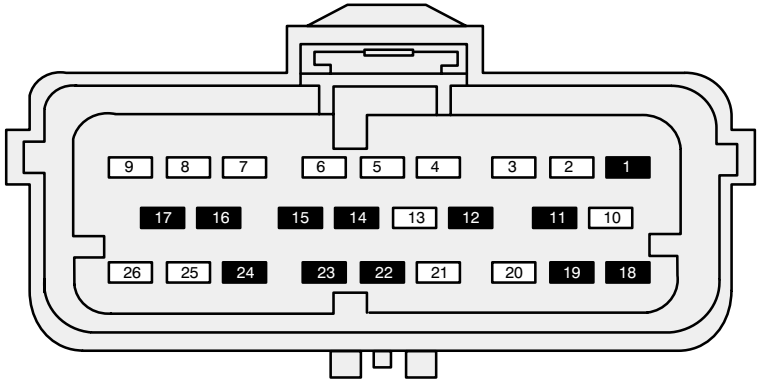
2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 501-20 of the Workshop Manual.



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

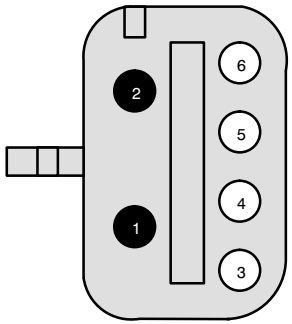
www.AUTOMOTIVEMECHANIC.ORG



C250

AIR BAG DIAGNOSTIC MONITOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	364 (BK/LG)	Power (Hot in Run)
3	614 (GY/OG)	Driver Air Bag
4	615 (GY/WH)	Driver Air Bag
5	70 (LB/WH)	Data Link Connector
6	607 (LB/OG)	Passenger Air Bag Module
7	616 (PK/BK)	Passenger Air Bag
8	1112 (WH/LB)	Passenger Air Bag Deactivation (PAD) Module
9	1113 (YE/LG)	Passenger Air Bag Deactivation (PAD) Module Illumination
10	649 (BK/OG)	Ground
11	–	NOT USED
12	–	NOT USED
13	364 (BK/LG)	Power (Hot in Run)
14	–	NOT USED
15	–	NOT USED
16	–	NOT USED
17	–	NOT USED
18	–	NOT USED
19	–	NOT USED
20	608 (BK/YE)	Warning Indicators
21	649 (BK/OG)	Ground
22	–	NOT USED
23	–	NOT USED
24	–	NOT USED
25	619 (PK/WH)	Crash Sensors
26	183 (TN/YE)	Generic Electronic Module (GEM)



C256

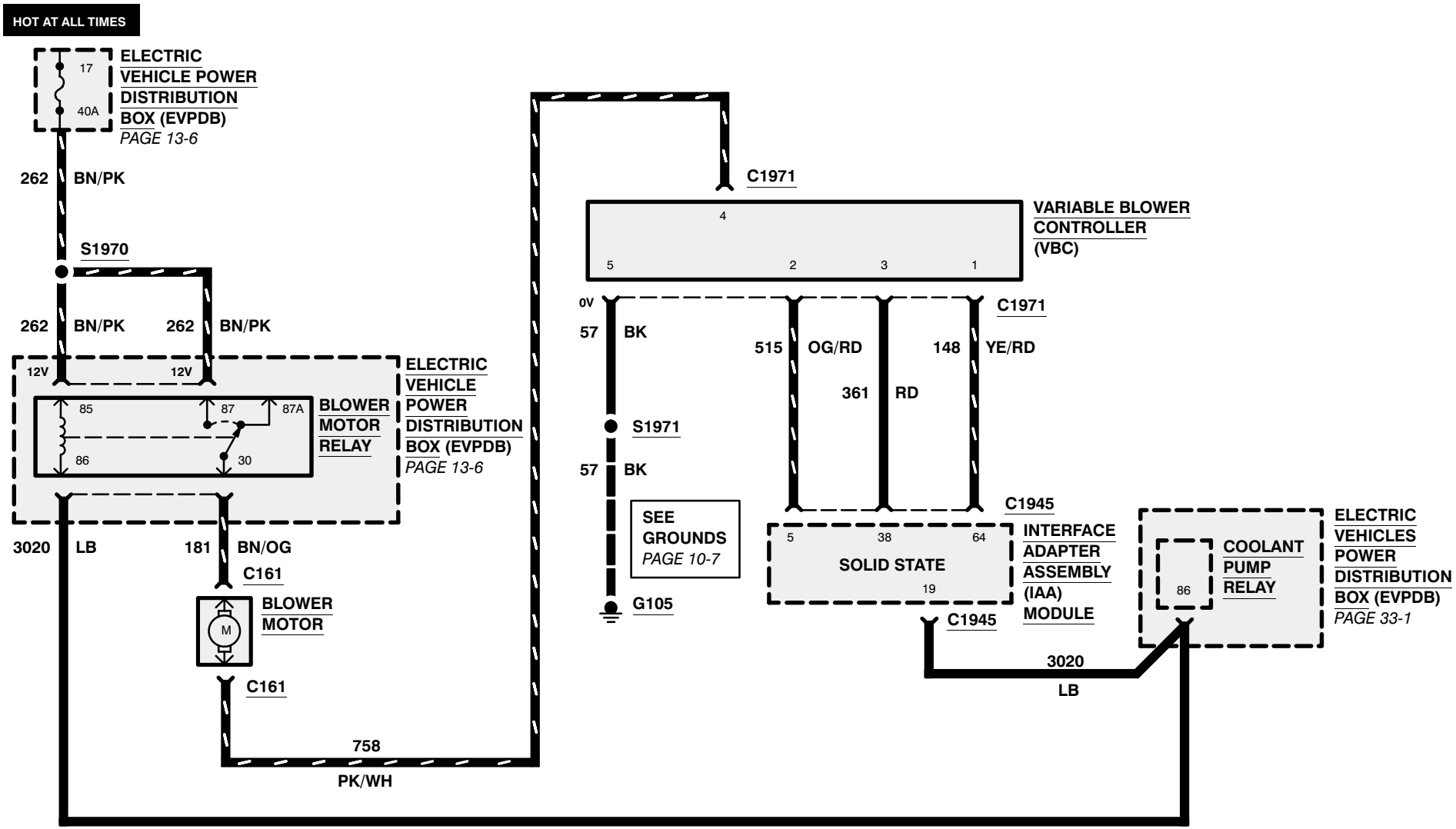
PASSENGER AIR BAG DEACTIVATION (PAD) SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	1112 (WH/LB)	Passenger Air Bag Diagnostic (PAD) Module
4	649 (BK/OG)	Ground
5	364 (BK/LG)	Power (Hot In Run)
6	1113 (YE/LG)	Passenger Air Bag Deactivation Module Illumination

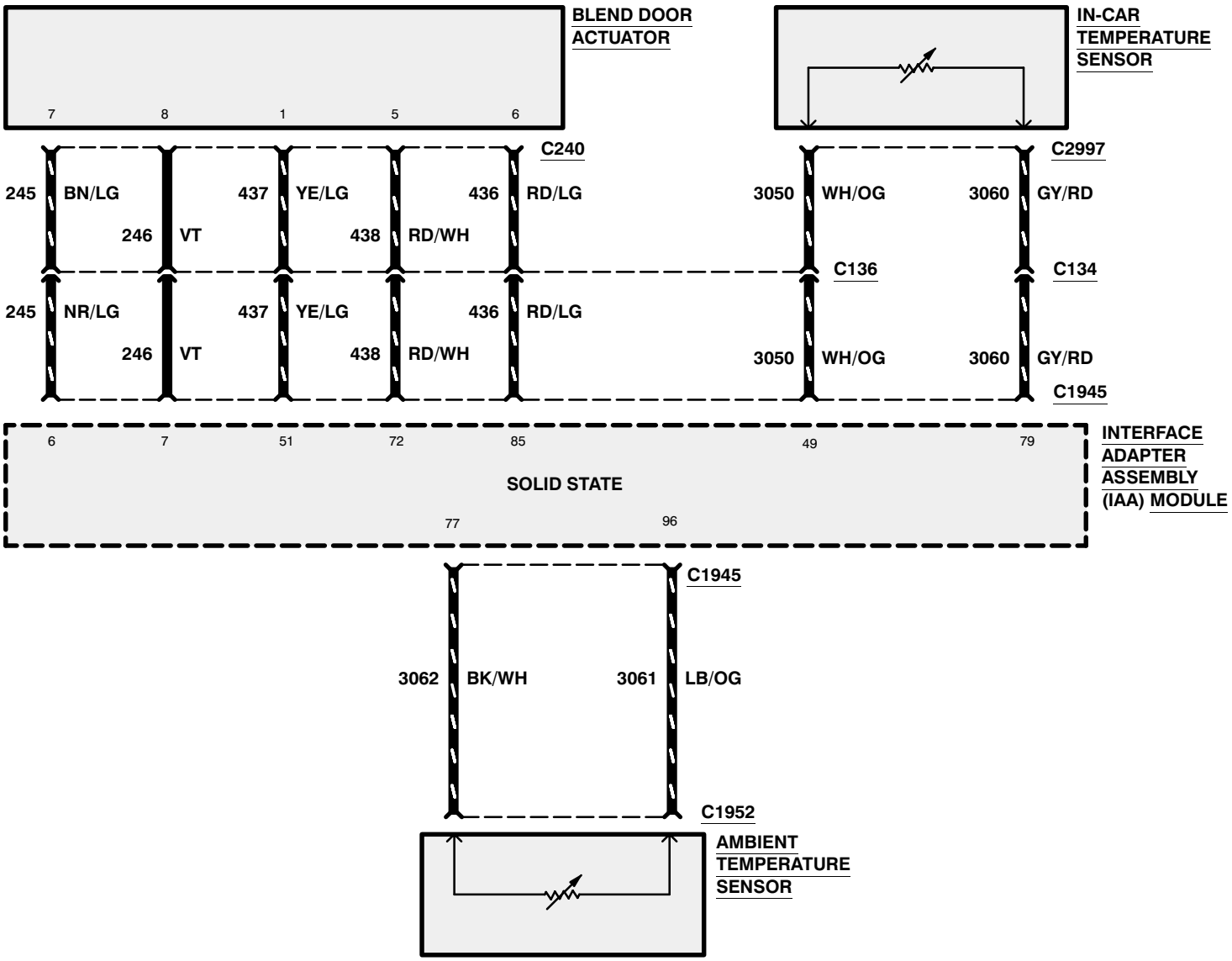
www.AUTOMOTIVEMECHANIC.org

53-1 HEATER

For diagnostic information, refer to Section 412-02 of the Workshop Manual.

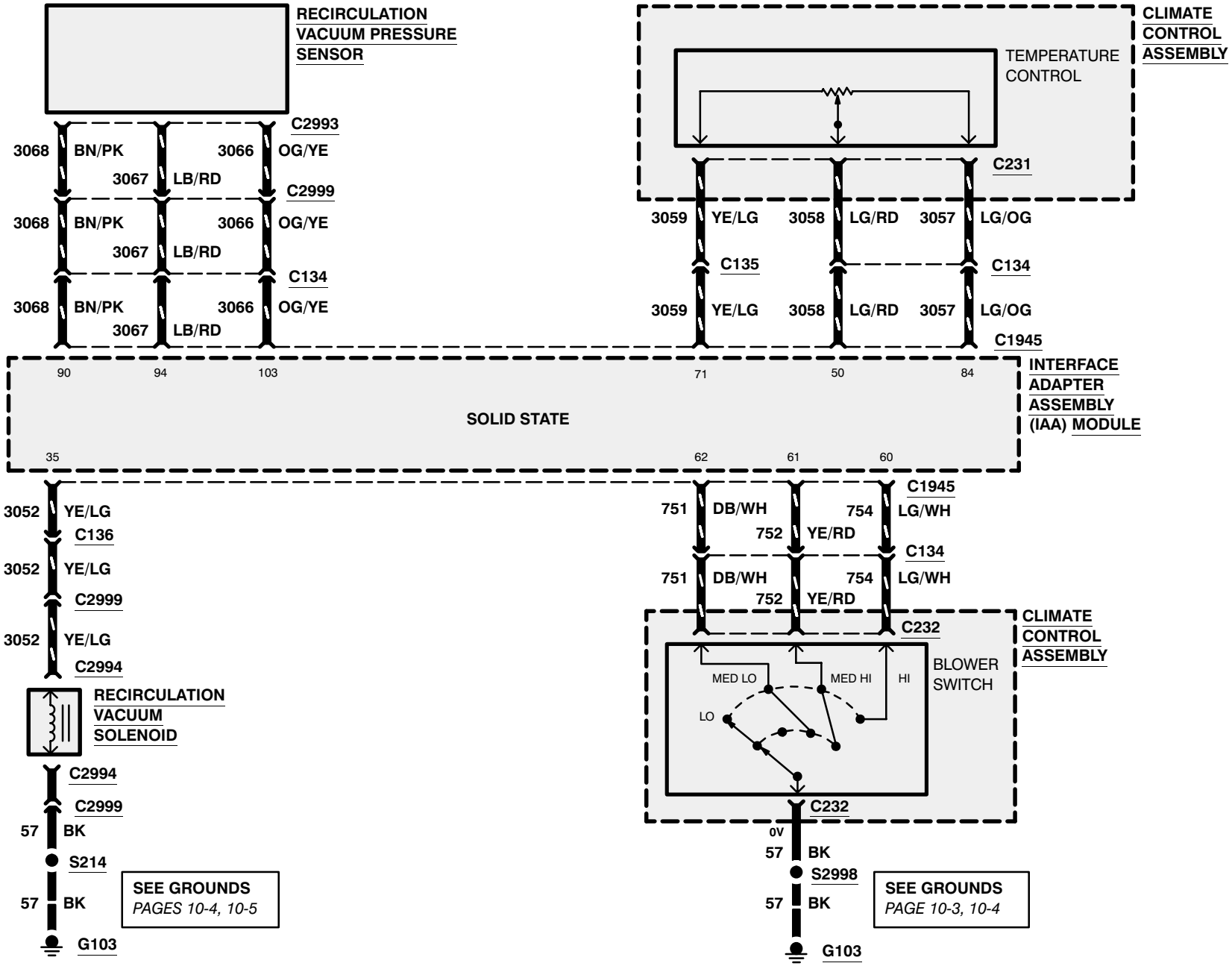


www.AUTOMOTIVEMECHANIC.org

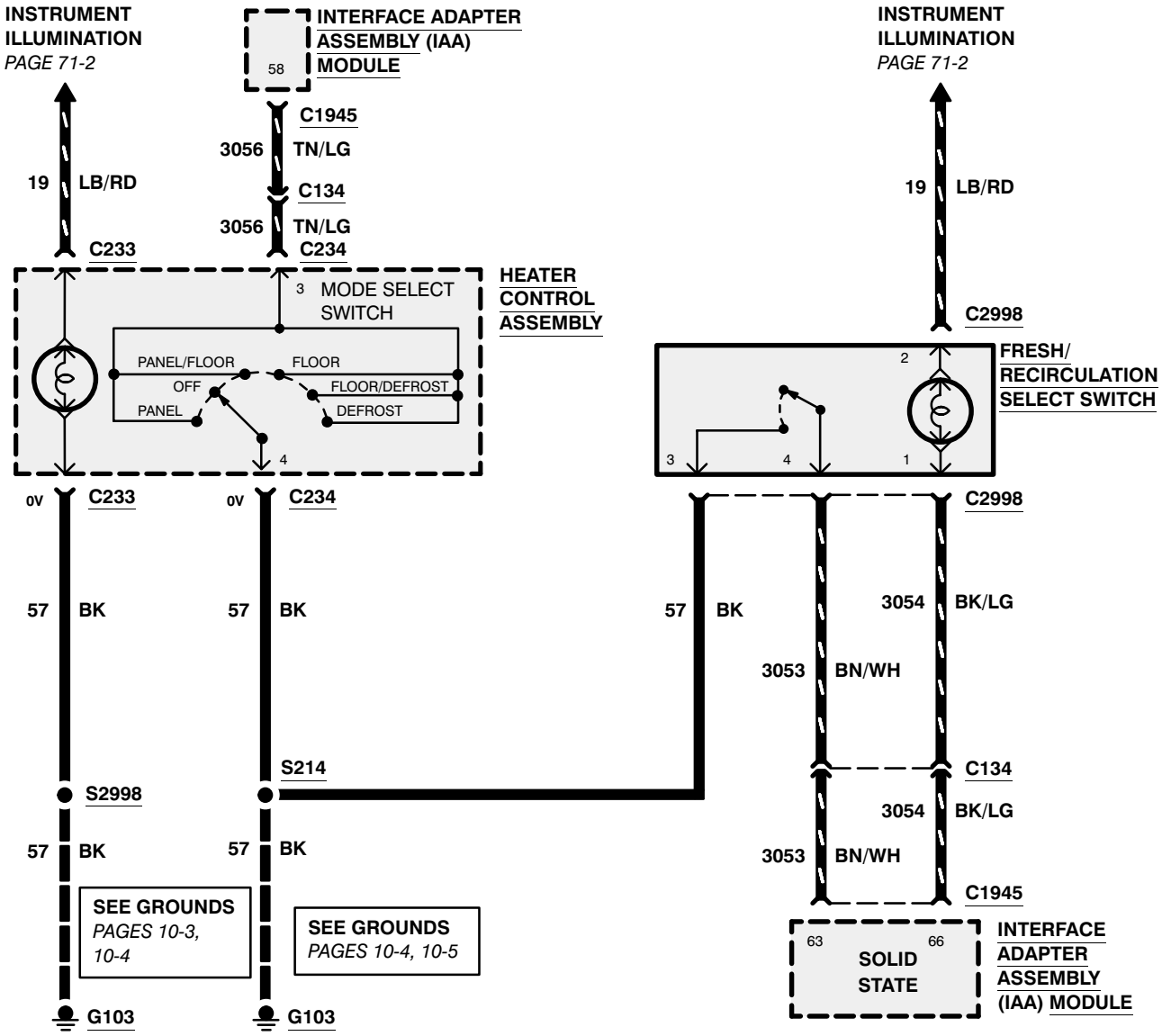


www.AUTOMOTIVEMECHANIC.org

53-3 HEATER

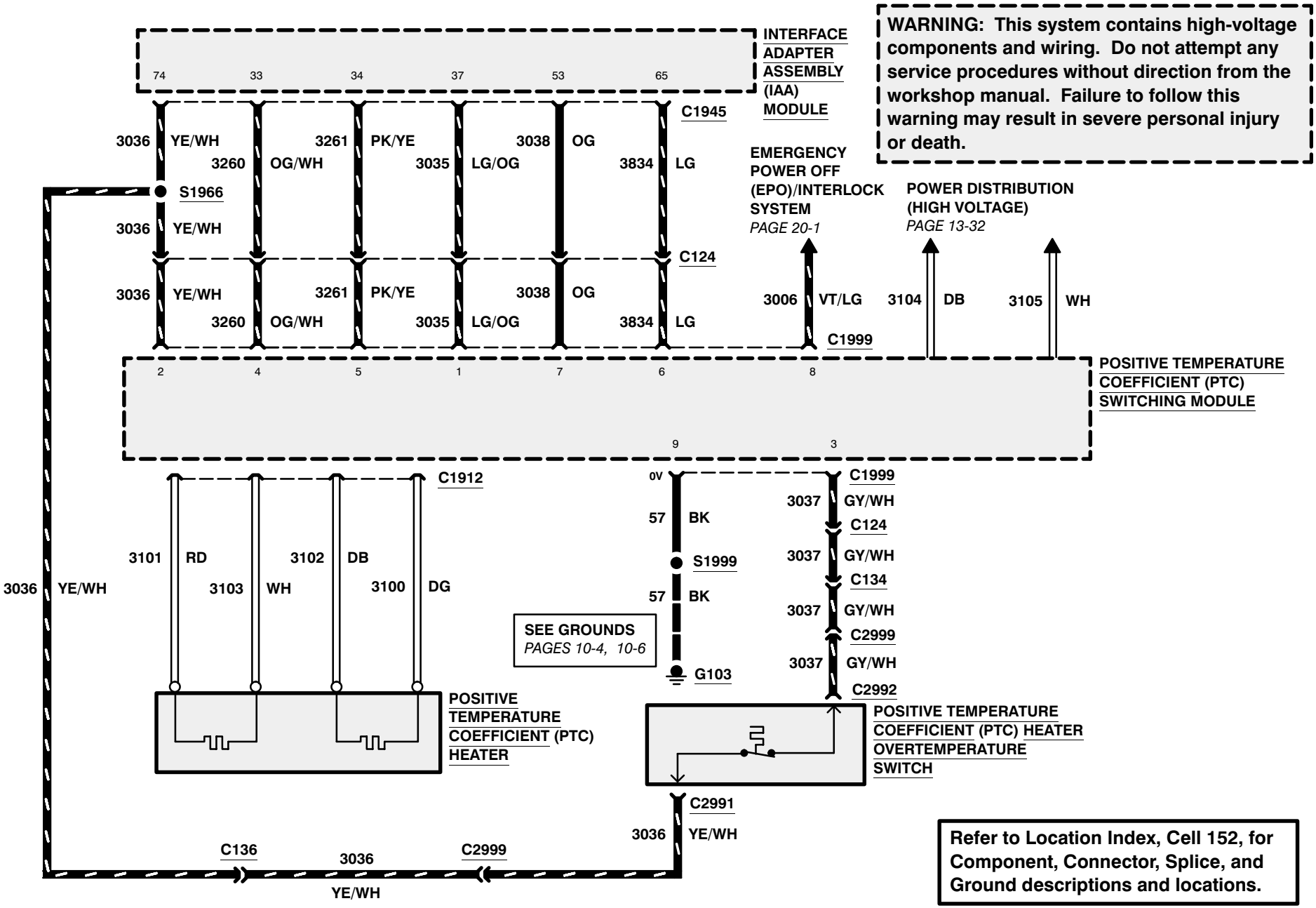


www.AUTOMOTIVEMECHANIC.org

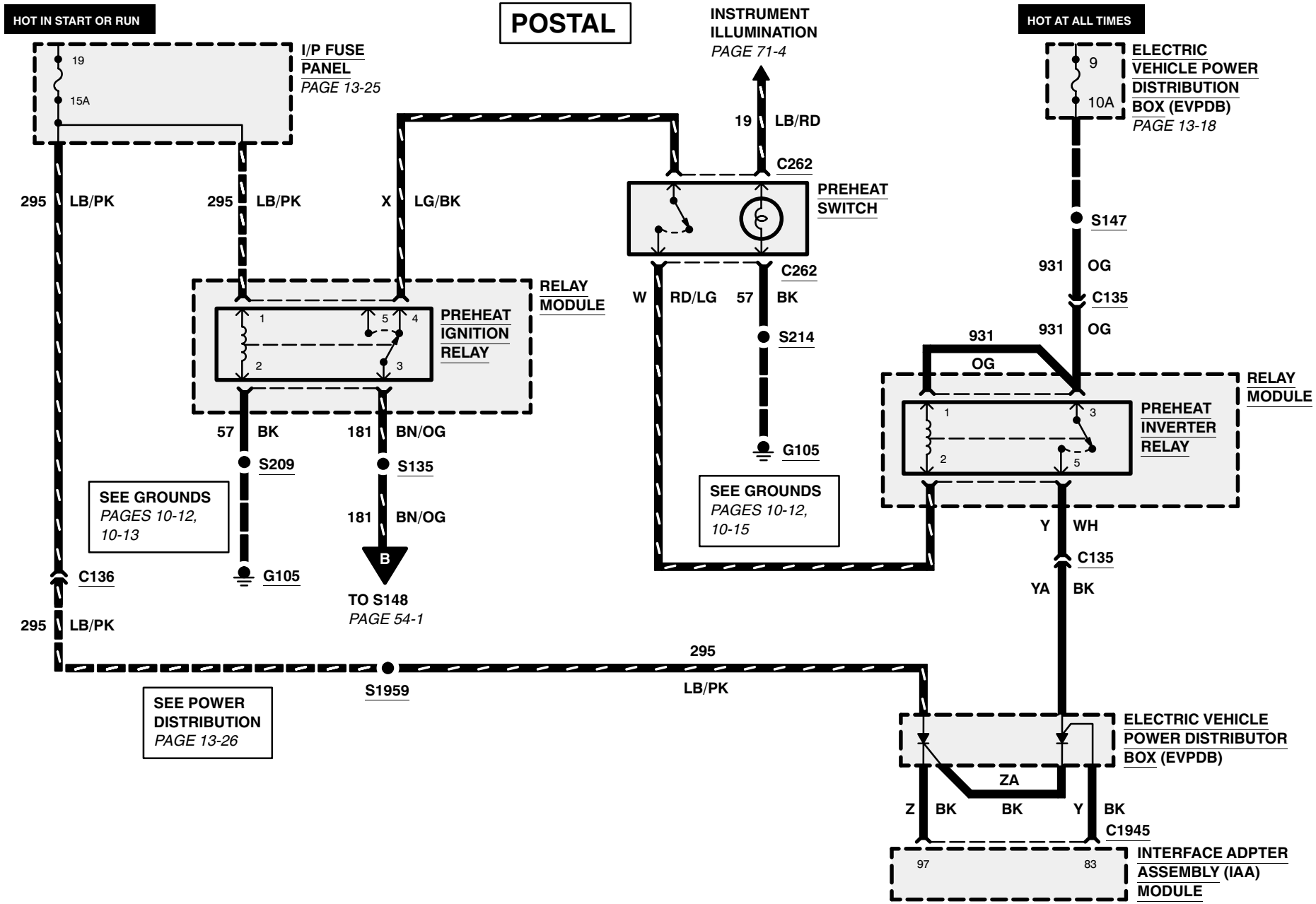


www.AUTOMOTIVEMECHANIC.org

53-5 HEATER



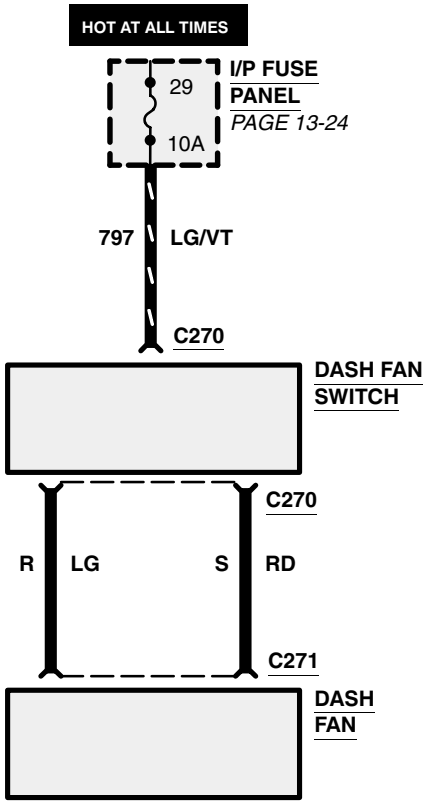
www.AUTOMOTIVEMECHANIC.org



www.AUTOMOTIVEMECHANIC.org

53-7 HEATER

POSTAL



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

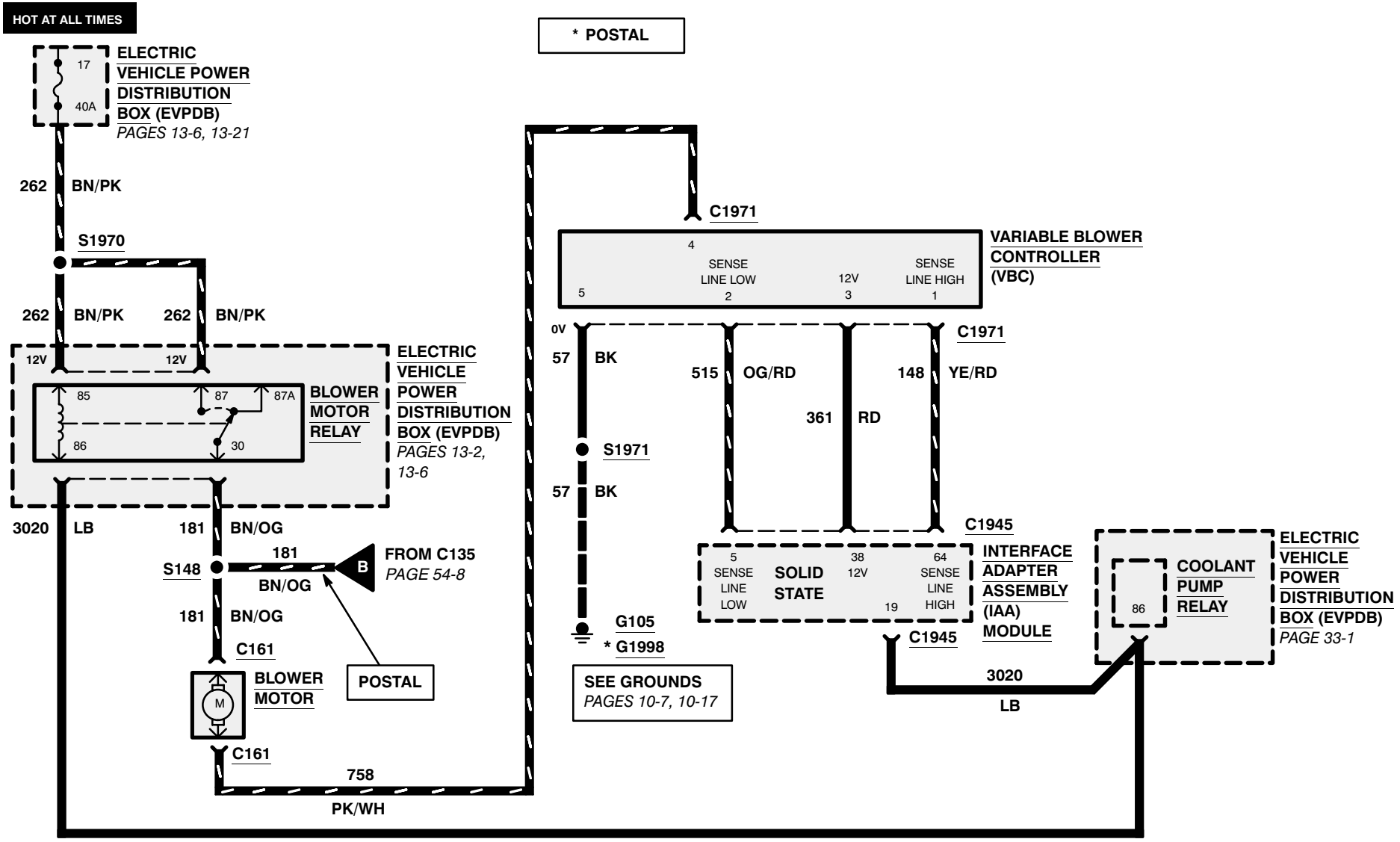
www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVE MECHANIC.ORG

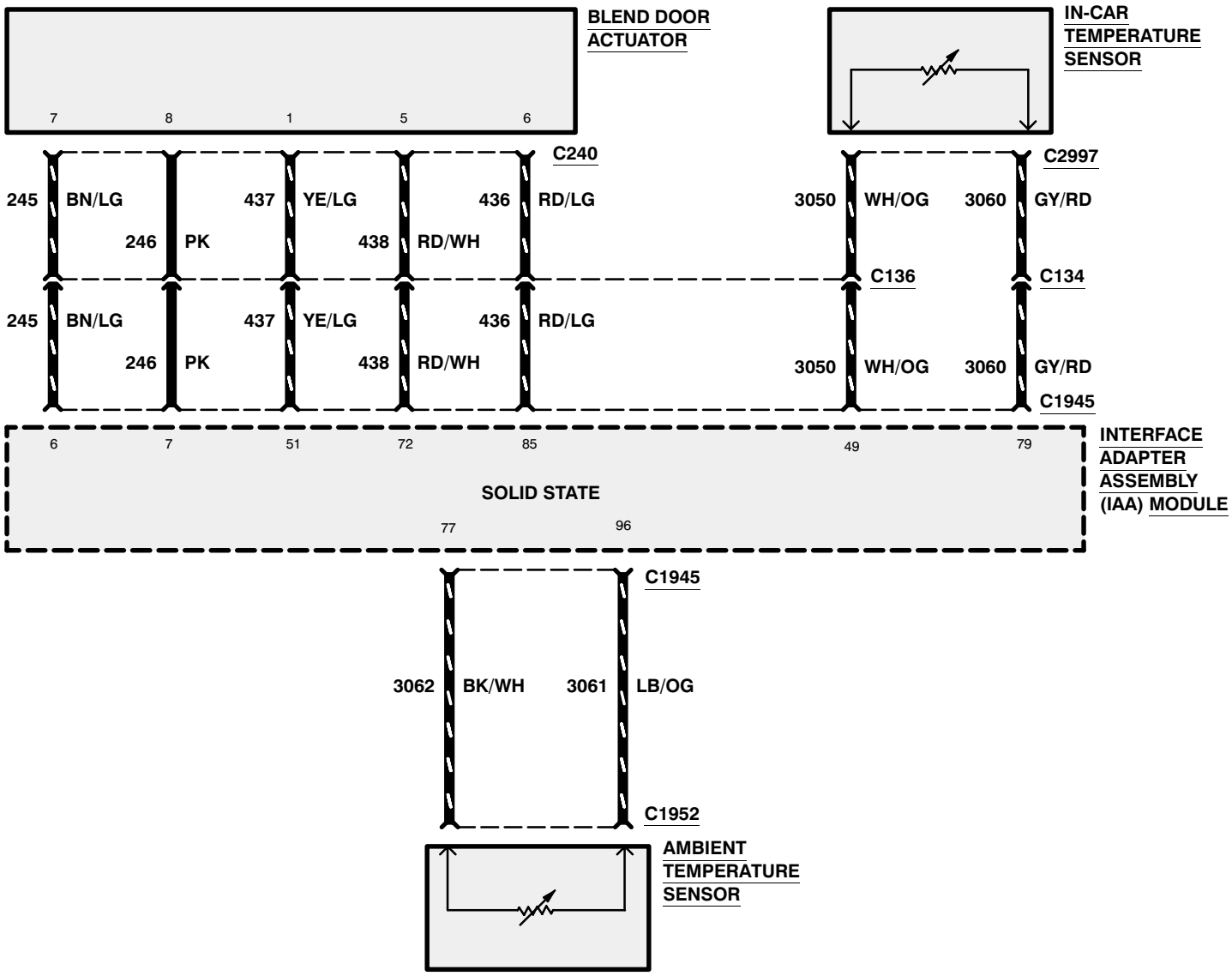
54-1 AIR CONDITIONER/HEATER

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 412-03 of the Workshop Manual.

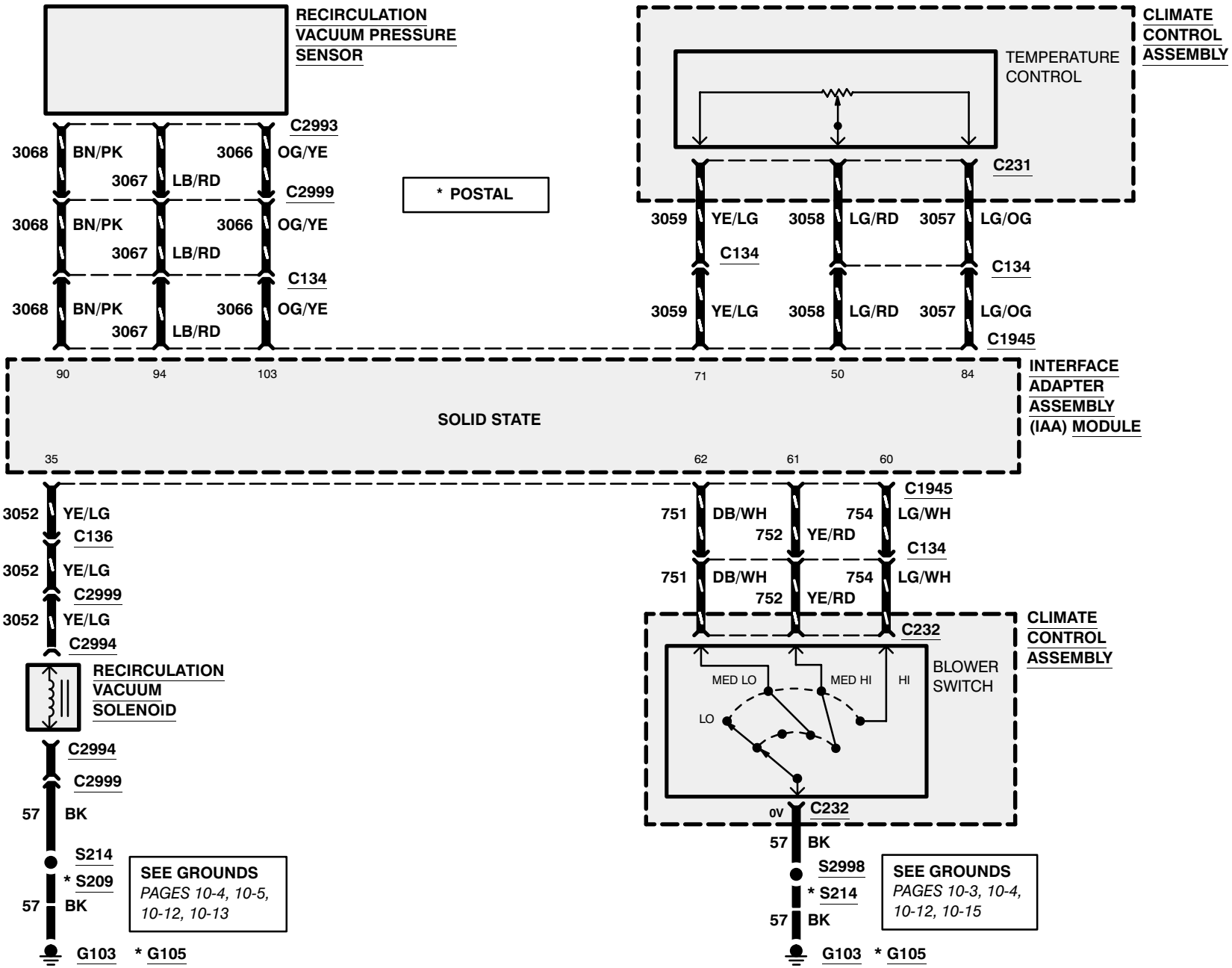


www.AUTOMOTIVEMECHANIC.ORG

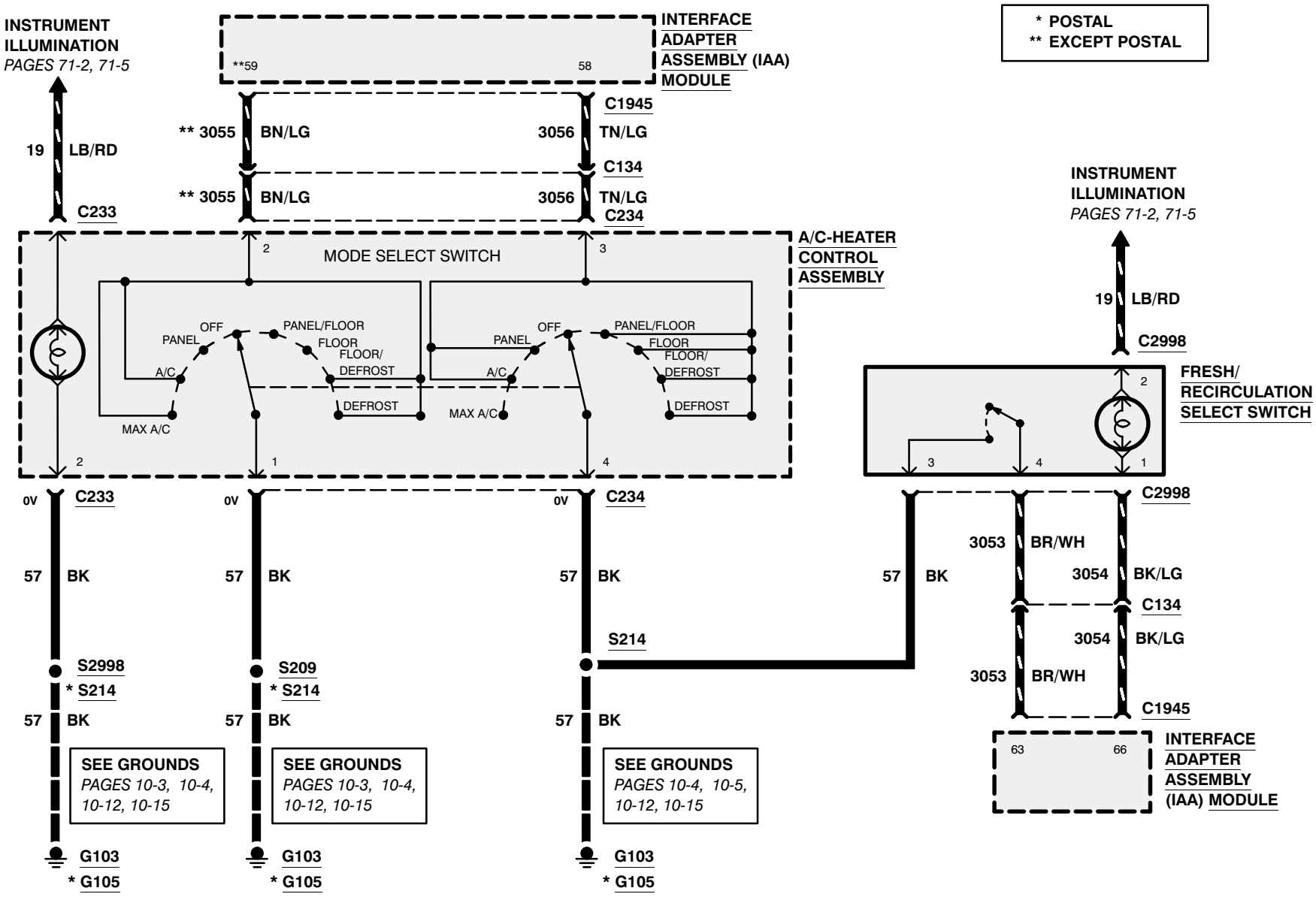


www.AUTOMOTIVEMECHANIC.org

54-3 AIR CONDITIONER/HEATER

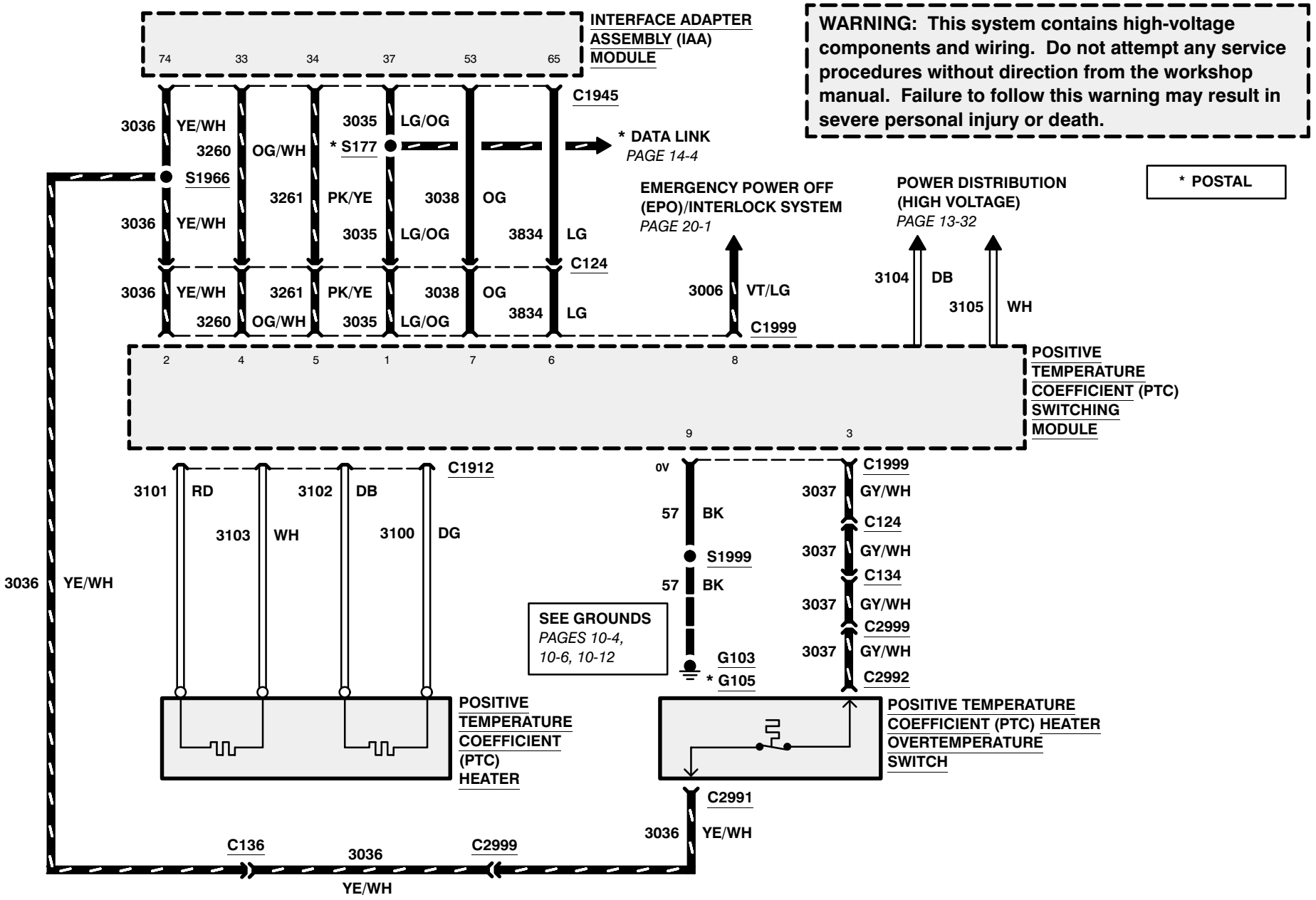


www.AUTOMOTIVEMECHANIC.ORG



www.AUTOMOTIVEMECHANIC.org

54-5 AIR CONDITIONER/HEATER

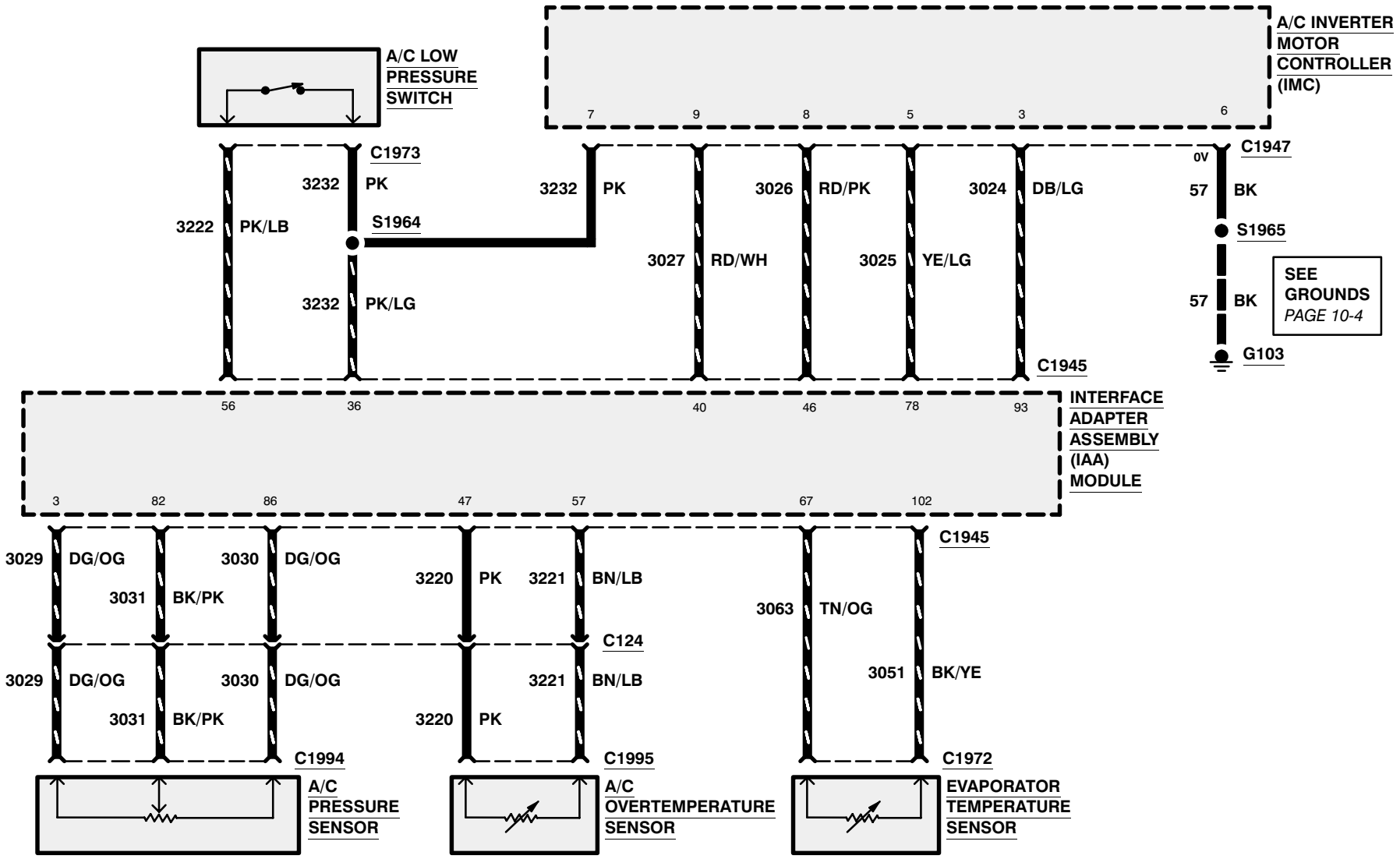


WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.

*** POSTAL**

www.AUTOMOTIVEMECHANIC.ORG

EXCEPT POSTAL

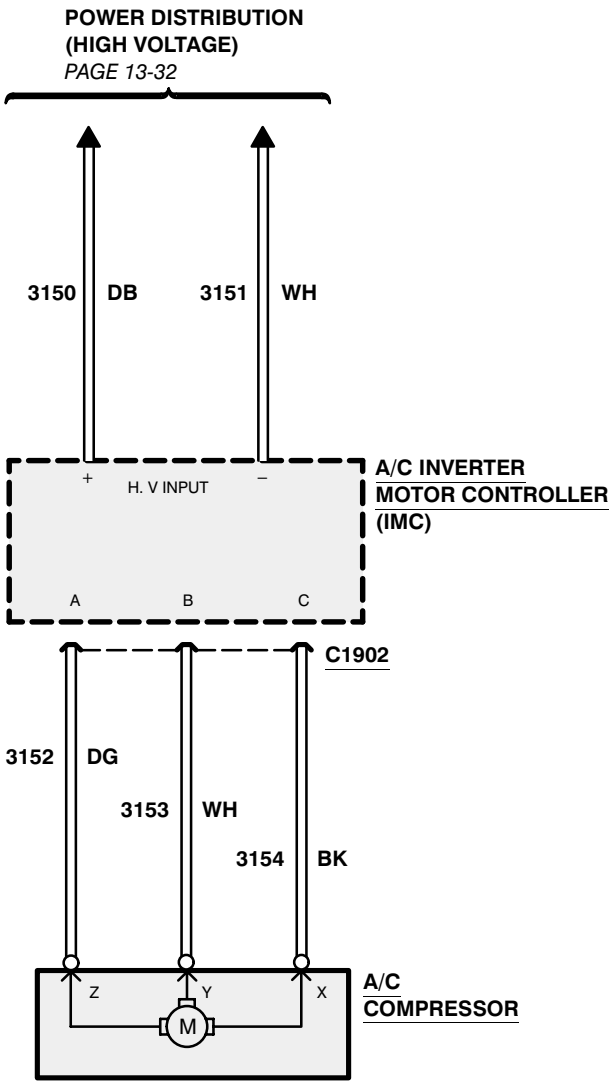


www.AUTOMOTIVEMECHANIC.org

54-7 AIR CONDITIONER/HEATER

EXCEPT POSTAL

WARNING: This system contains high-voltage components and wiring. Do not attempt any service procedures without direction from the workshop manual. Failure to follow this warning may result in severe personal injury or death.



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVEMECHANIC.ORG

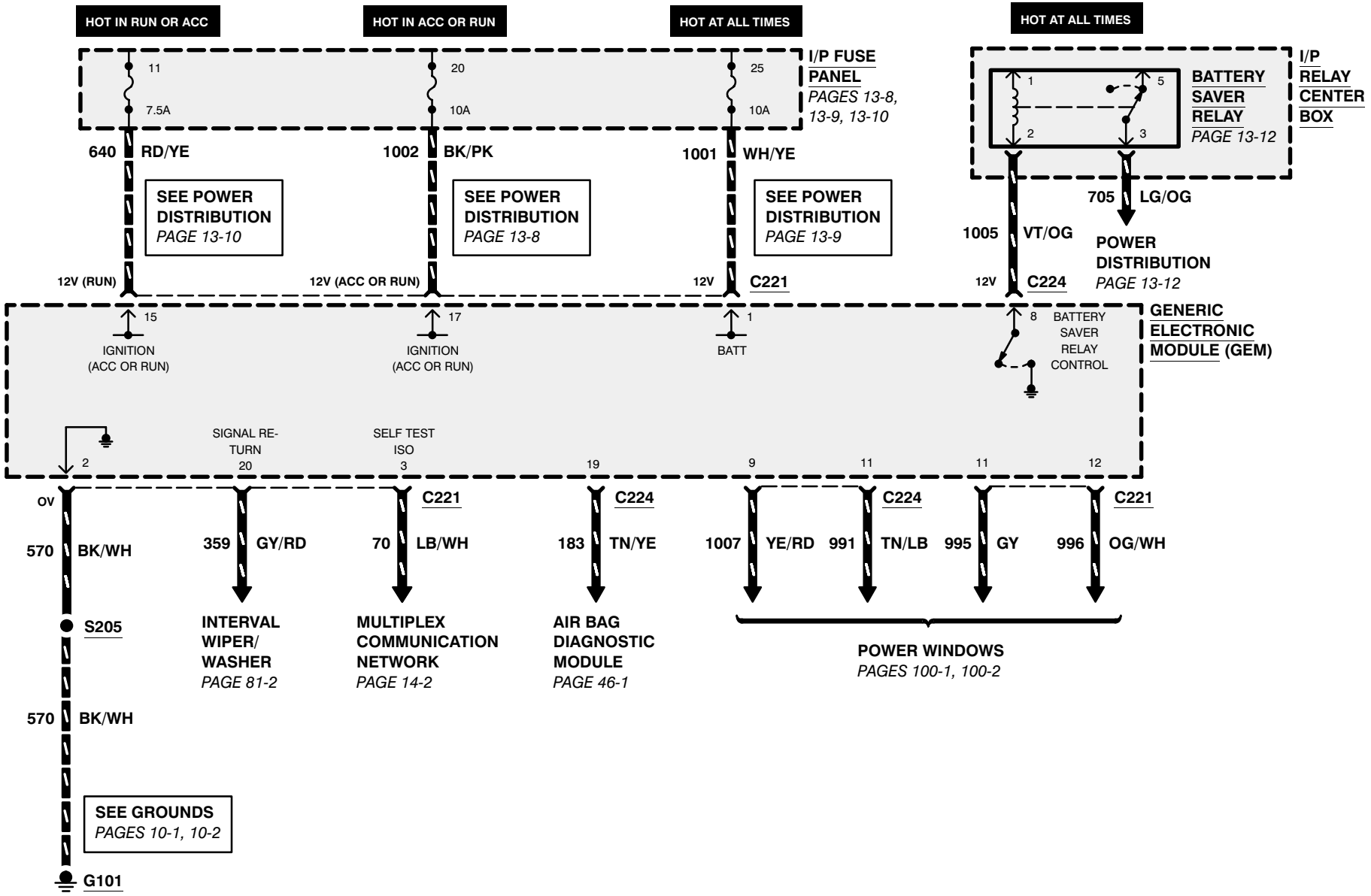
www.AUTOMOTIVEMECHANIC.org

59-1 GENERIC ELECTRONIC MODULE (GEM)

2001 RANGER ELECTRIC VEHICLE

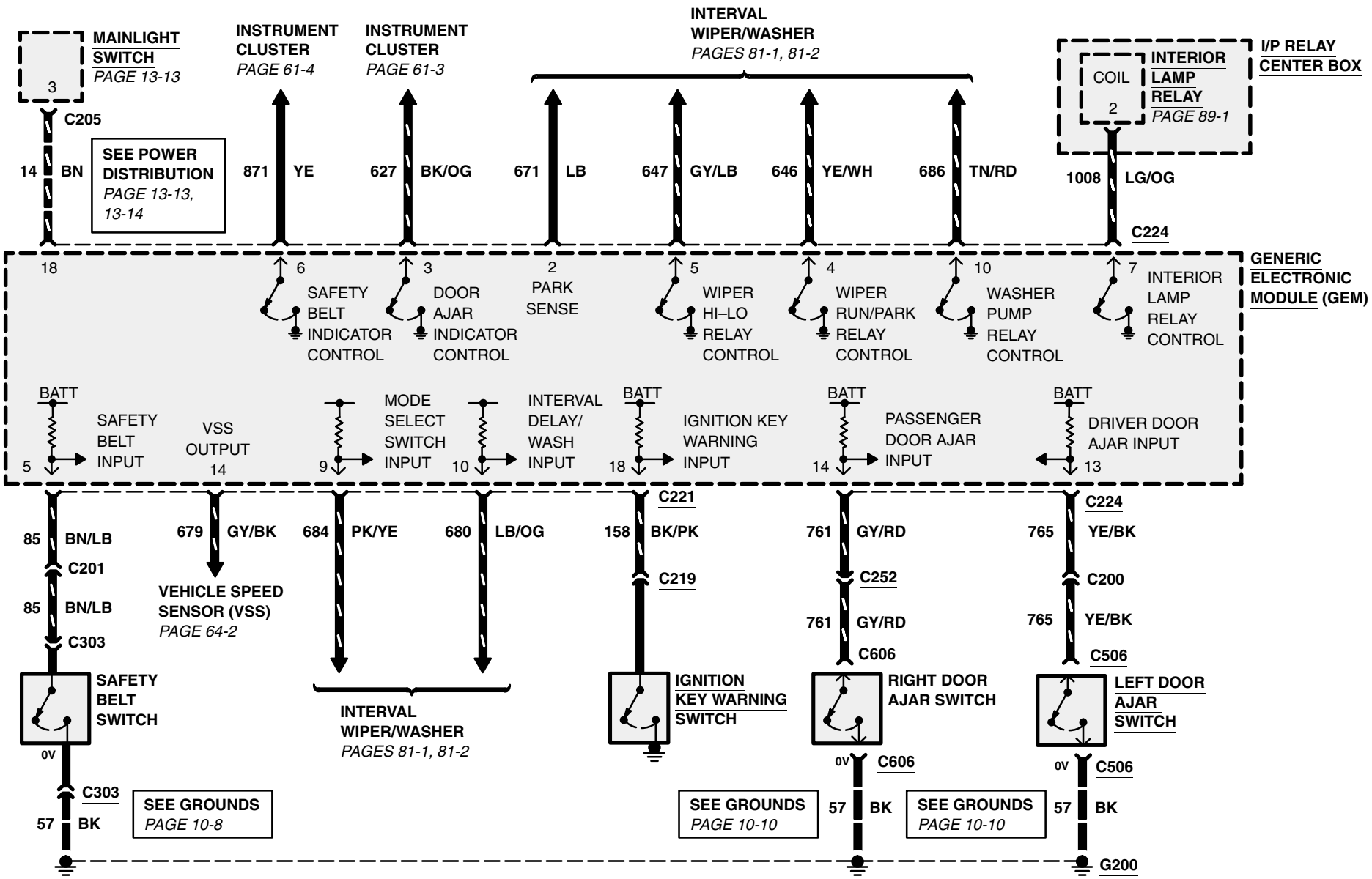
For diagnostic information, refer to Section 419-10 of the Workshop Manual.

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

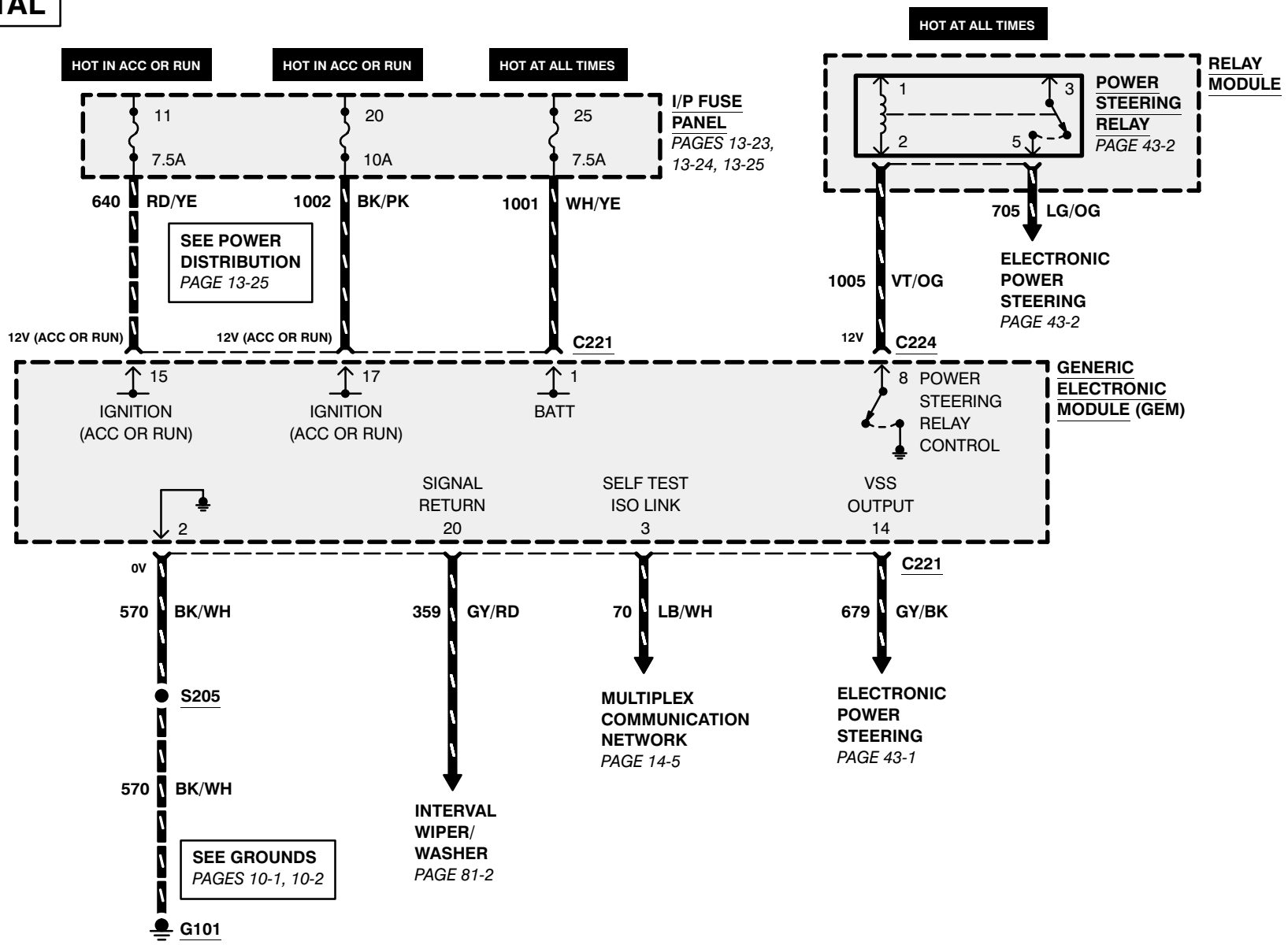
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.ORG

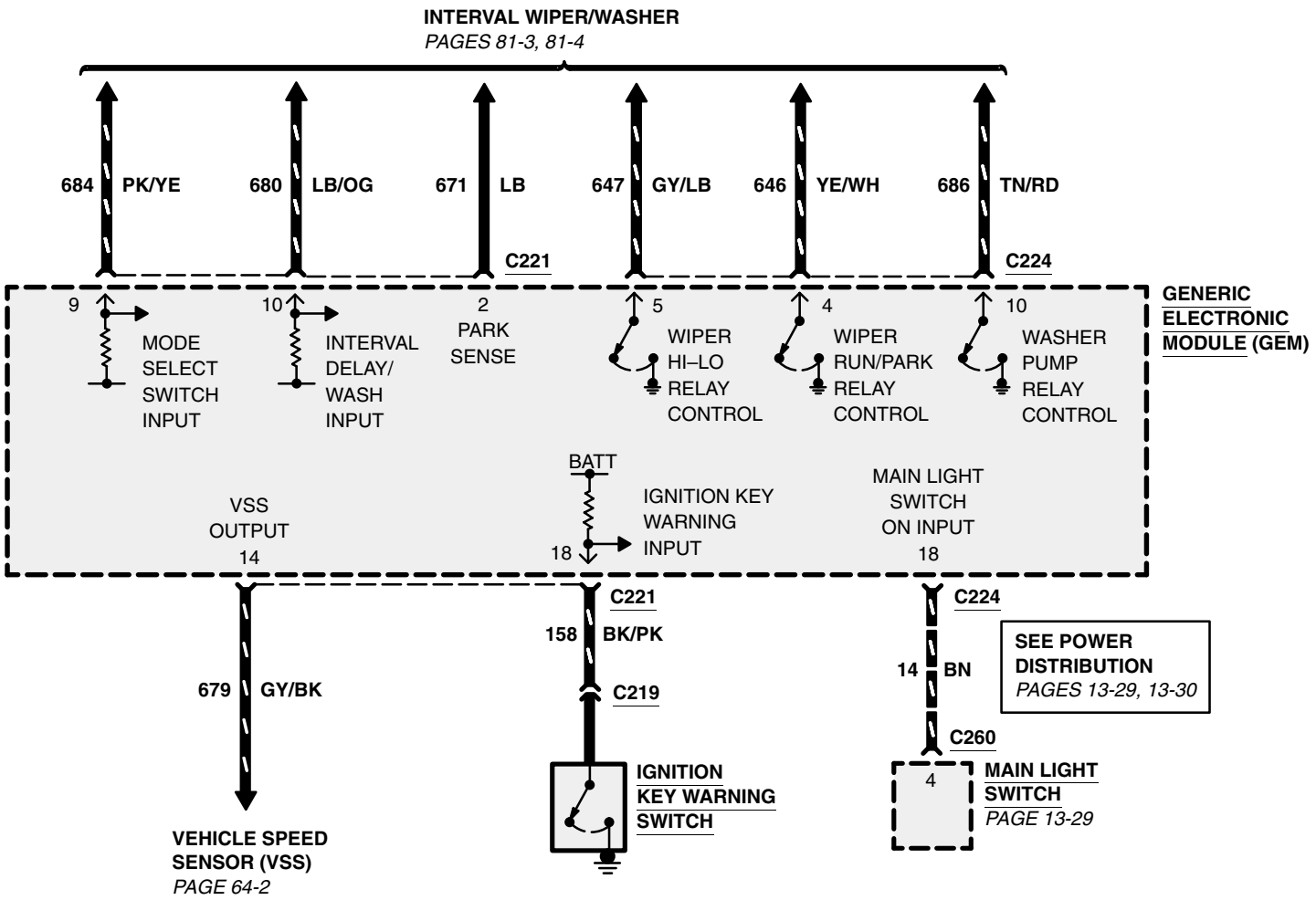
59-3 GENERIC ELECTRONIC MODULE (GEM)

POSTAL



www.AUTOMOTIVEMECHANIC.org

POSTAL

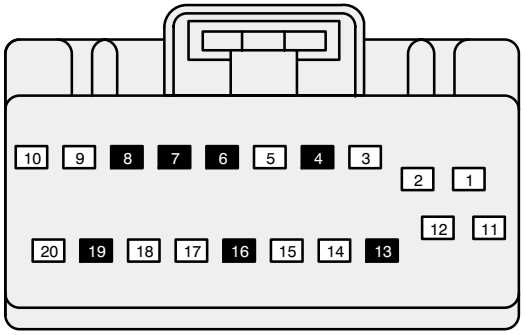


Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVEMECHANIC.ORG

59-5 GENERIC ELECTRONIC MODULE (GEM)

* POSTAL



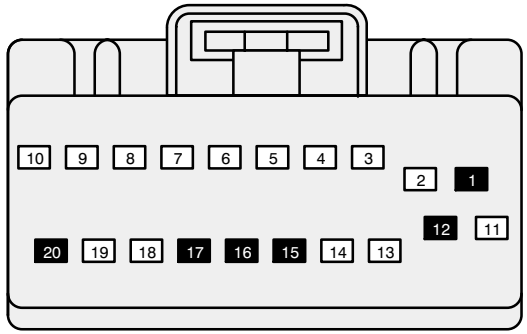
C221

GENERIC ELECTRONIC MODULE (GEM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	1001 (WH/YE)	Power (Hot at All Times)	12	996 (OG/WH)	One Touch Down Sense (Low)
2	570 (BK/WH)	Power Ground		* –	NOT USED
3	70 (LB/WH)	Data Link Connector (DLC)	13	–	NOT USED
4	–	NOT USED	14	679 (GY/BK)	Vehicle Speed Sensor Output (RABS)
5	85 (BN/LB)	Safety Belt Swtich Input	15	640 (RD/YE)	Warning Lamp Feed
	* –	NOT USED	16	–	NOT USED
6	–	NOT USED	17	1002 (BK/PK)	Ignition (Hot in Acc or Run)
7	–	NOT USED	18	158 (BK/PK)	Ignition Key Warning Switch Input (Hot in Acc or Run)
8	–	NOT USED			
9	684 (PK/YE)	Wiper Mode Select Switch	19	–	NOT USED
10	680 (LB/OG)	Internal Delay/Wash Input	20	359 (GY/RD)	Signal Return
11	995 (GY)	One Touch Down Sense (High)			
	* –	NOT USED			

www.AUTOMOTIVEMECHANIC.ORG

* POSTAL



C224

GENERIC ELECTRONIC MODULE (GEM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	11	991 (TN/LB)	Down Window Command Input
2	671 (LB)	Wiper Sense Input		* –	NOT USED
3	627 (BK/OG)	Door Ajar Indicator Output	12	–	NOT USED
	* –	NOT USED	13	765 (YE/BK)	Left Door Switch Input
4	646 (YE/WH)	Wiper Run/Park Relay Control		* –	NOT USED
5	647 (GY/LB)	Wiper High/Low Relay Control	14	761 (GY/RD)	Right Door Switch Input
6	871 (YE)	Safety Belt Indicator Control		* –	NOT USED
	* –	NOT USED	15	–	NOT USED
7	1008 (LG/OG)	Interior Lamp Relay Control	16	–	NOT USED
	* –	NOT USED	17	–	NOT USED
8	1005 (VT/OG)	GEM Battery Saver Output Module	18	14 (BN)	Tail Lamps Feed
9	1007 (YE/RD)	One Touch Down Relay Output	19	183 (TN/YE)	Tone Generator
	* –	NOT USED		* –	NOT USED
10	686 (TN/RD)	Wiper Pump Relay Control	20	–	NOT USED

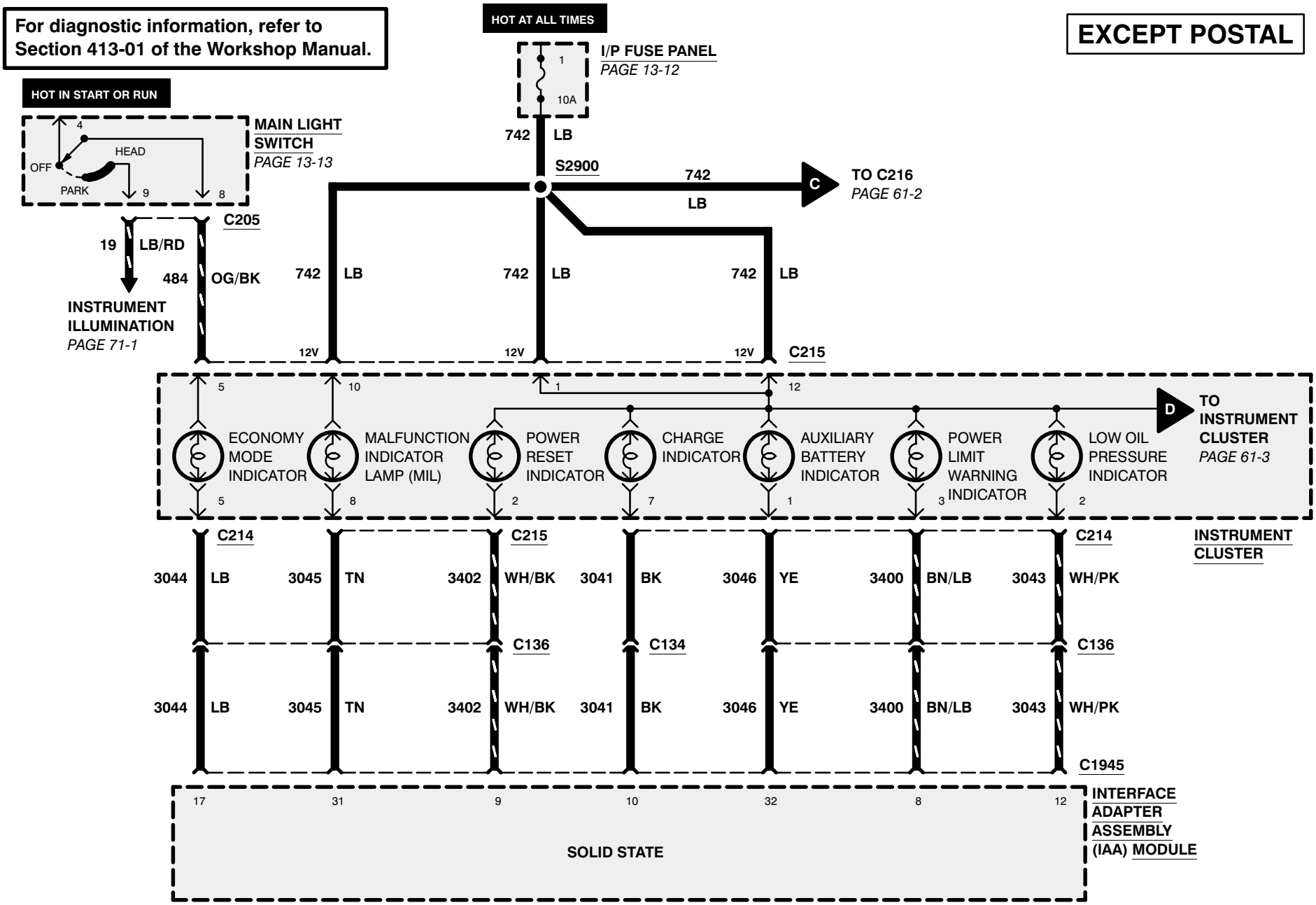
www.AUTOMOTIVEMECHANIC.org

61-1 INSTRUMENT CLUSTER

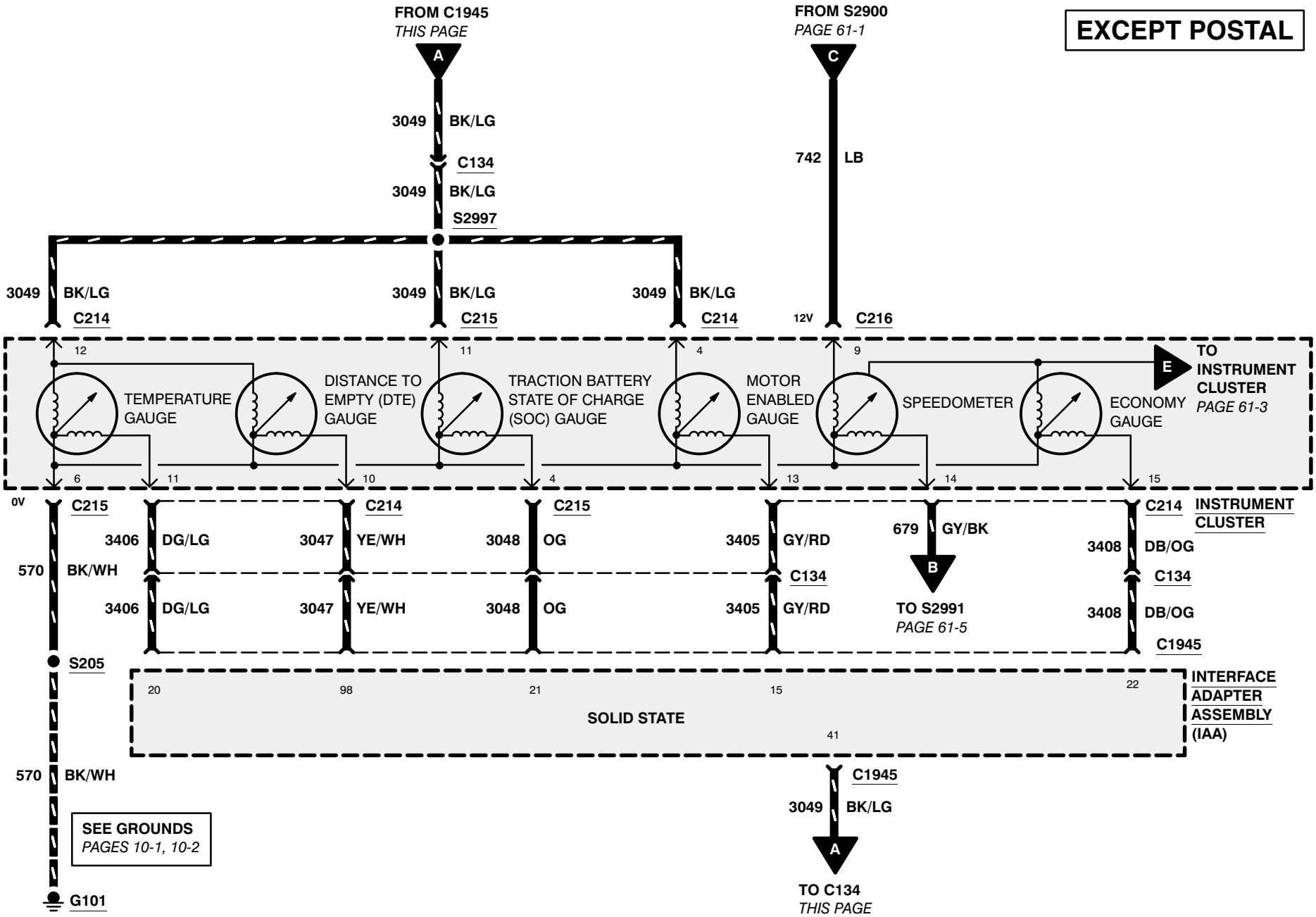
2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 413-01 of the Workshop Manual.

EXCEPT POSTAL

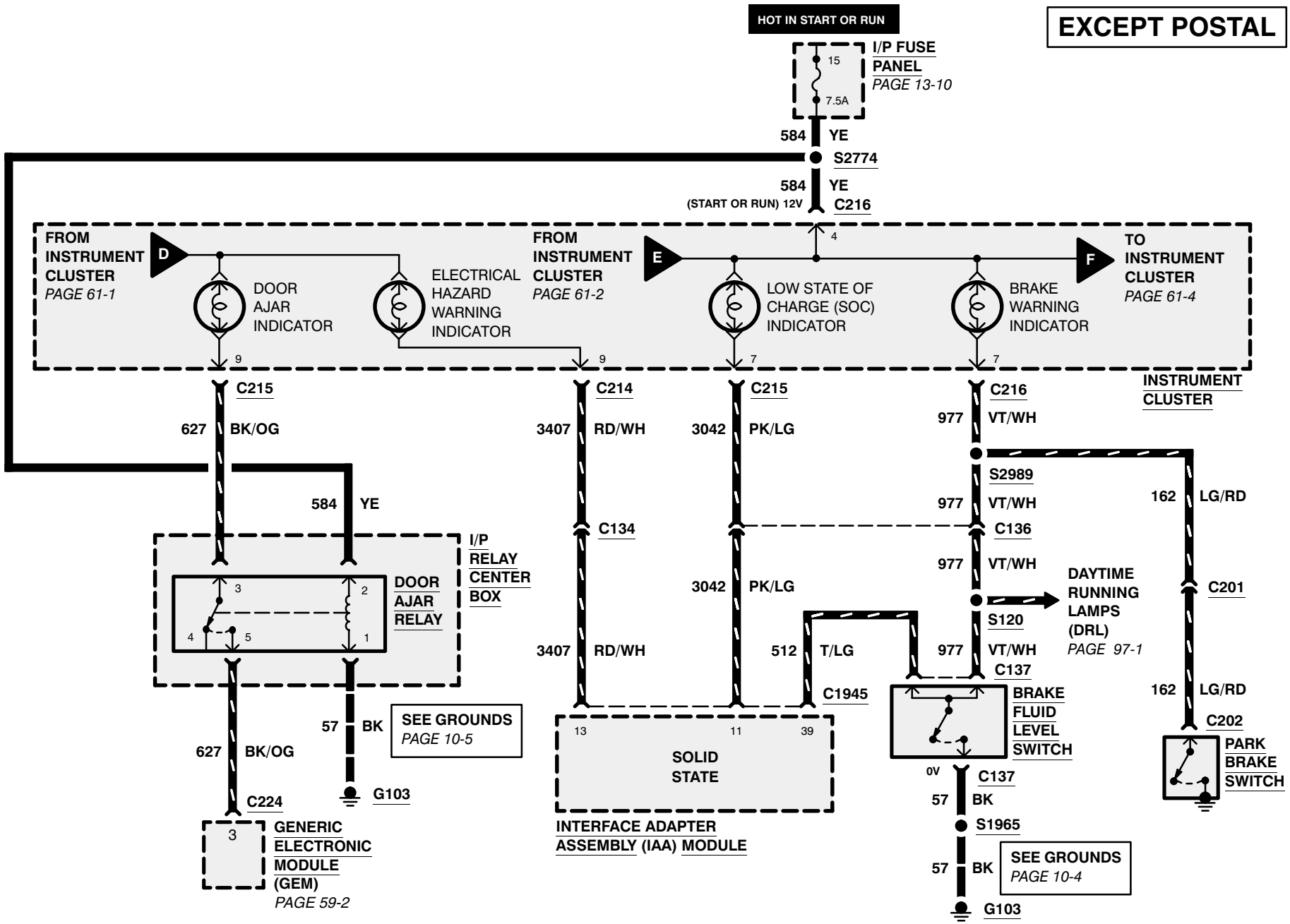


www.AUTOMOTIVEMECHANIC.org

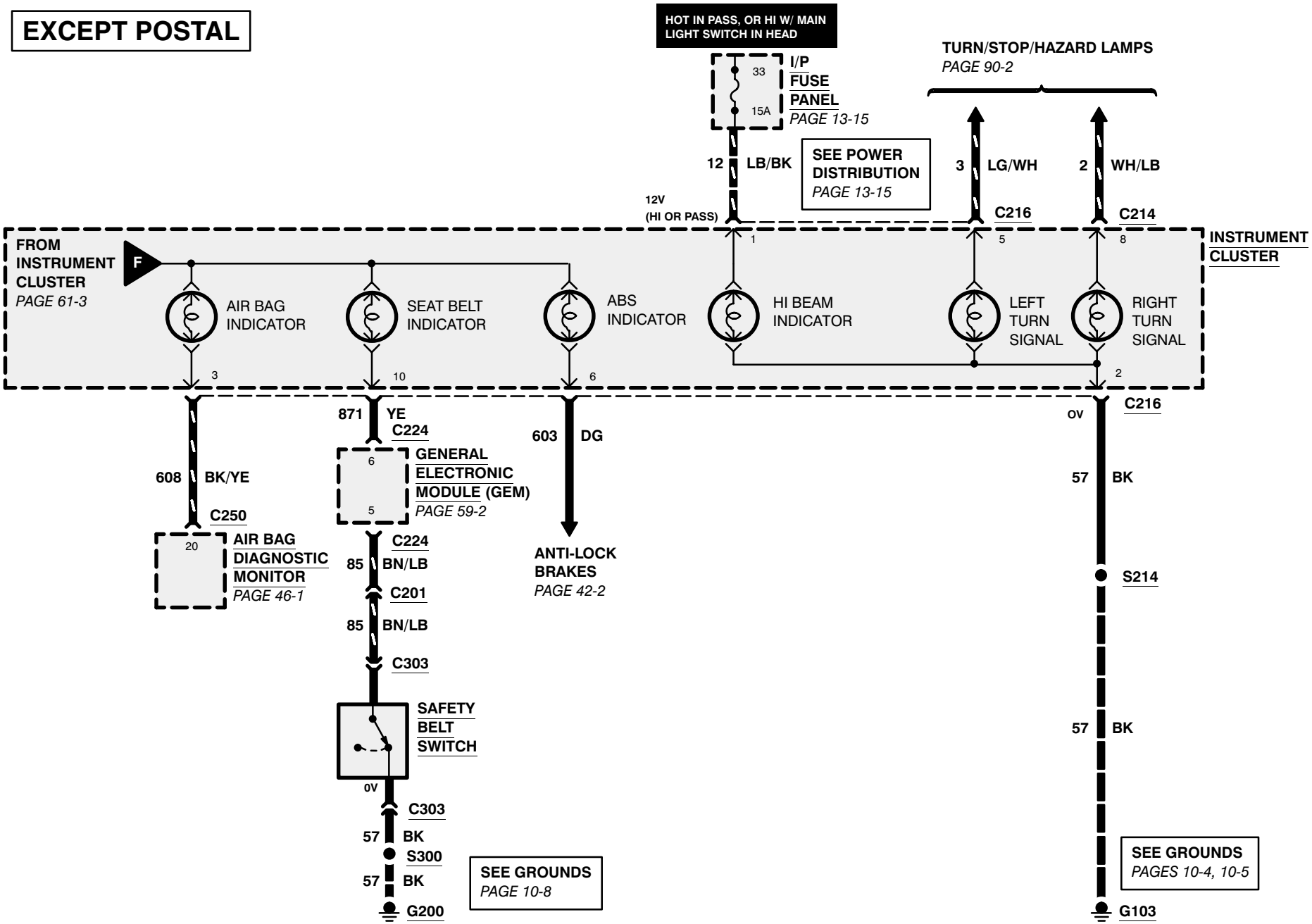


www.AUTOMOTIVEMECHANIC.org

61-3 INSTRUMENT CLUSTER

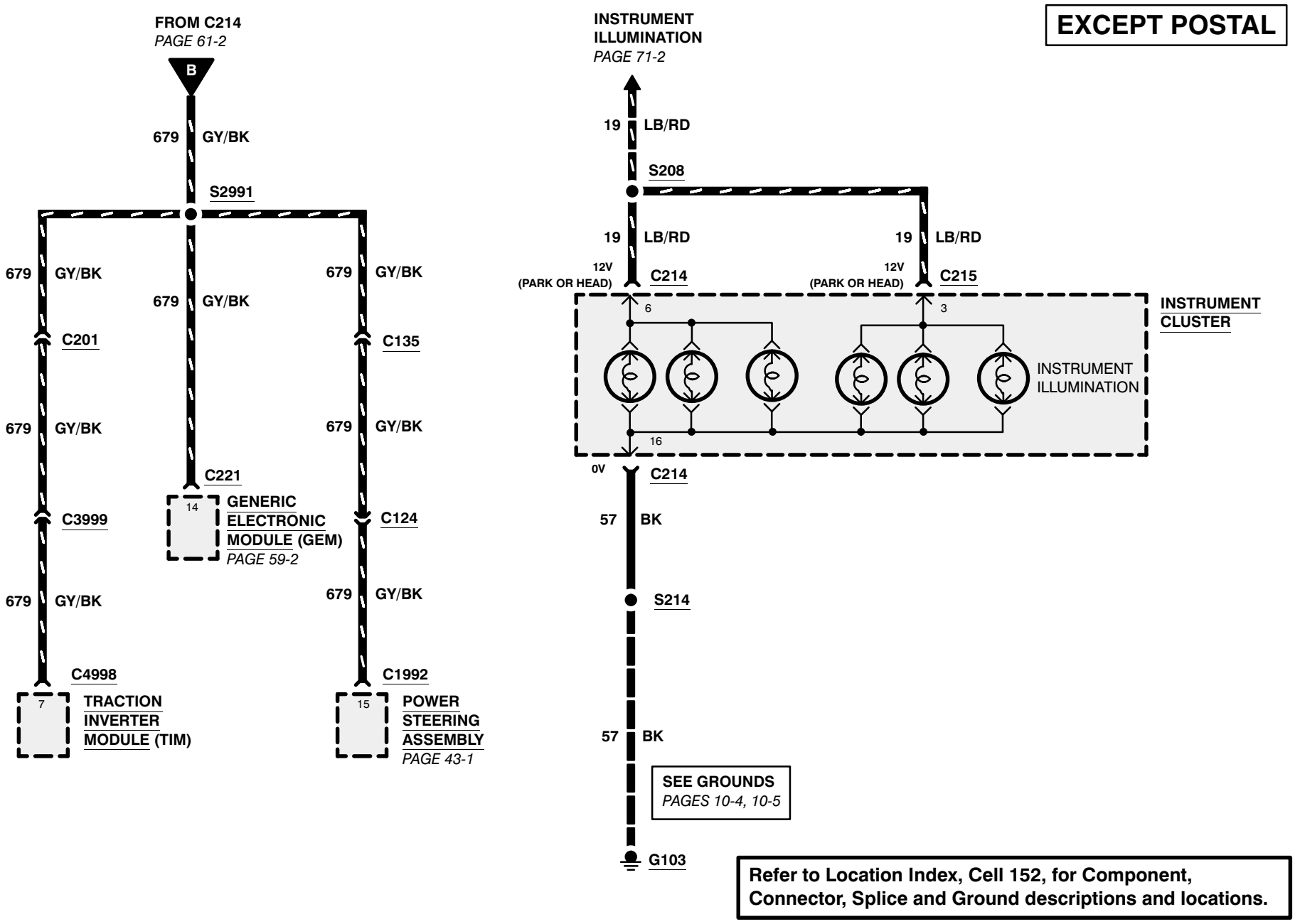


www.AUTOMOTIVEMECHANIC.org



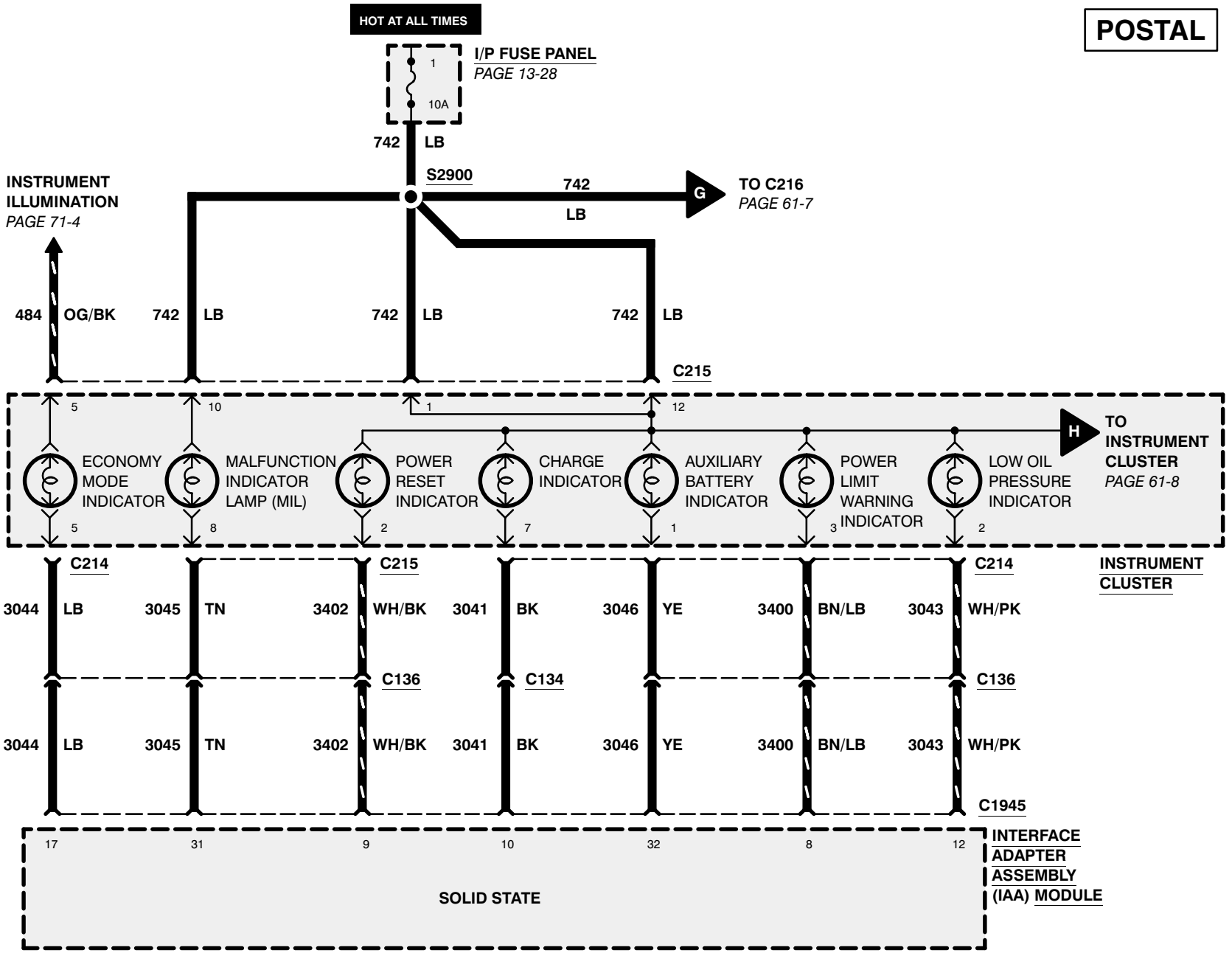
www.AUTOMOTIVEMECHANIC.org

61-5 INSTRUMENT CLUSTER



www.AUTOMOTIVEMECHANIC.org

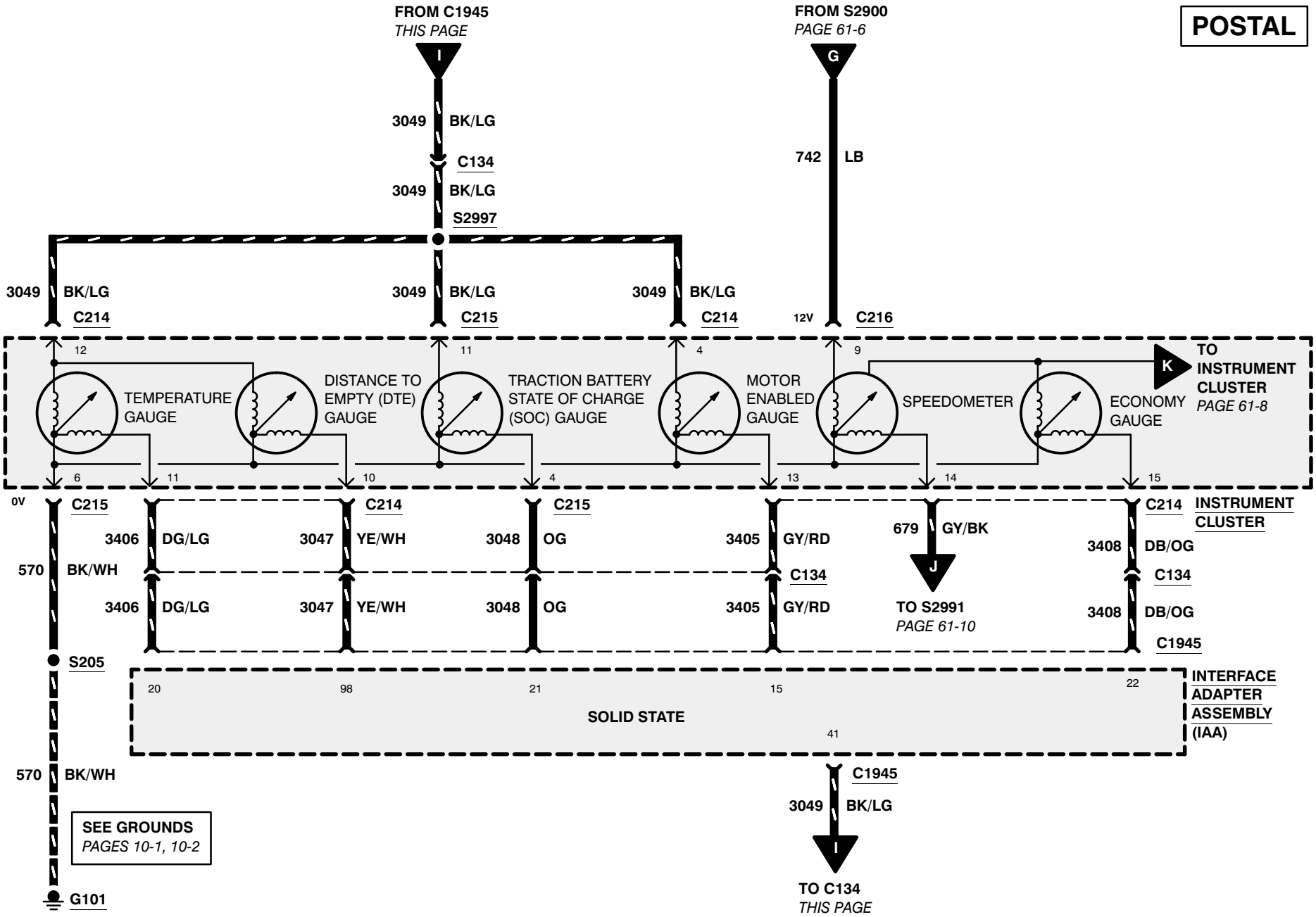
POSTAL



www.AUTOMOTIVEMECHANIC.org

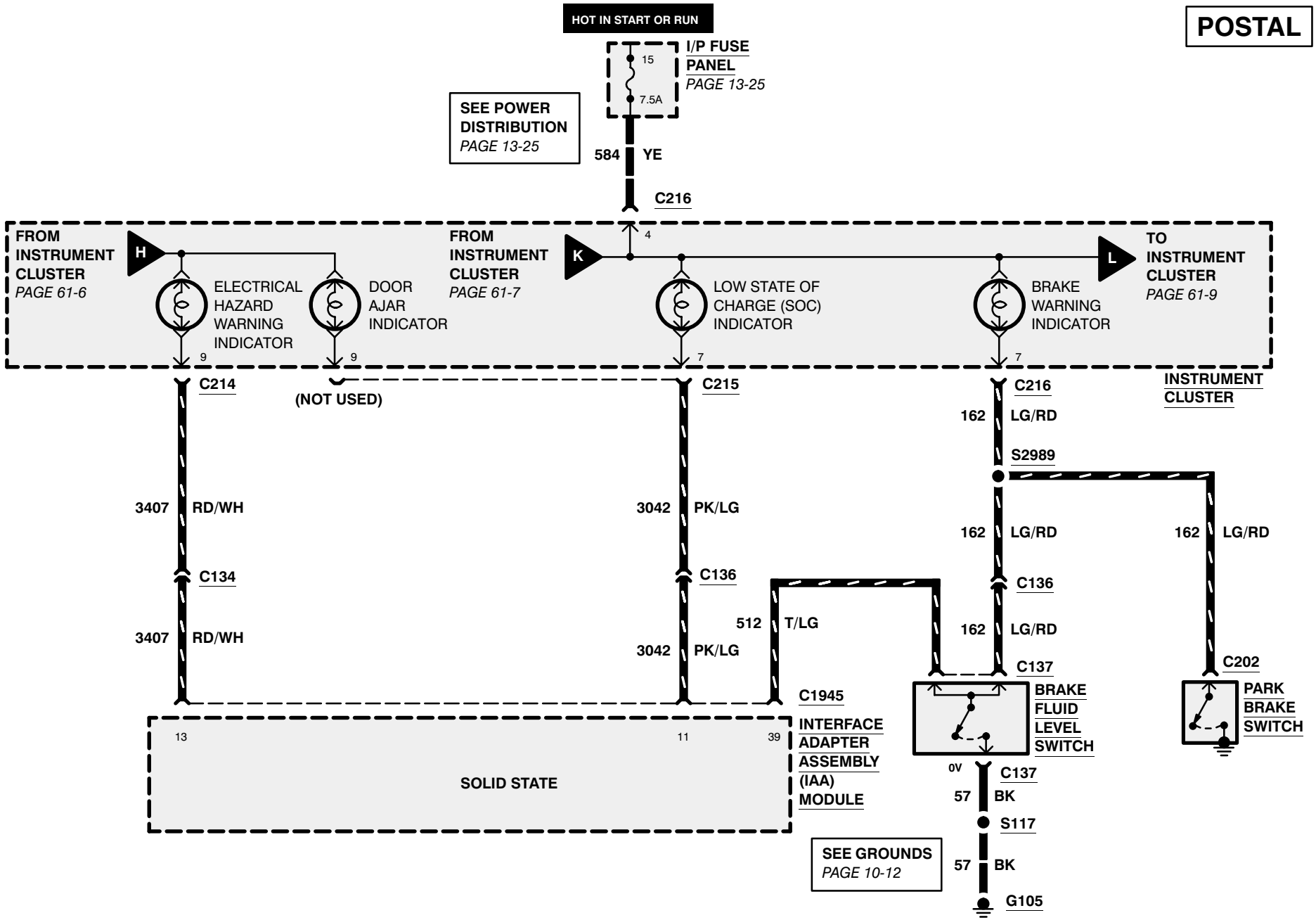
61-7 INSTRUMENT CLUSTER

POSTAL



www.AUTOMOTIVEMECHANIC.org

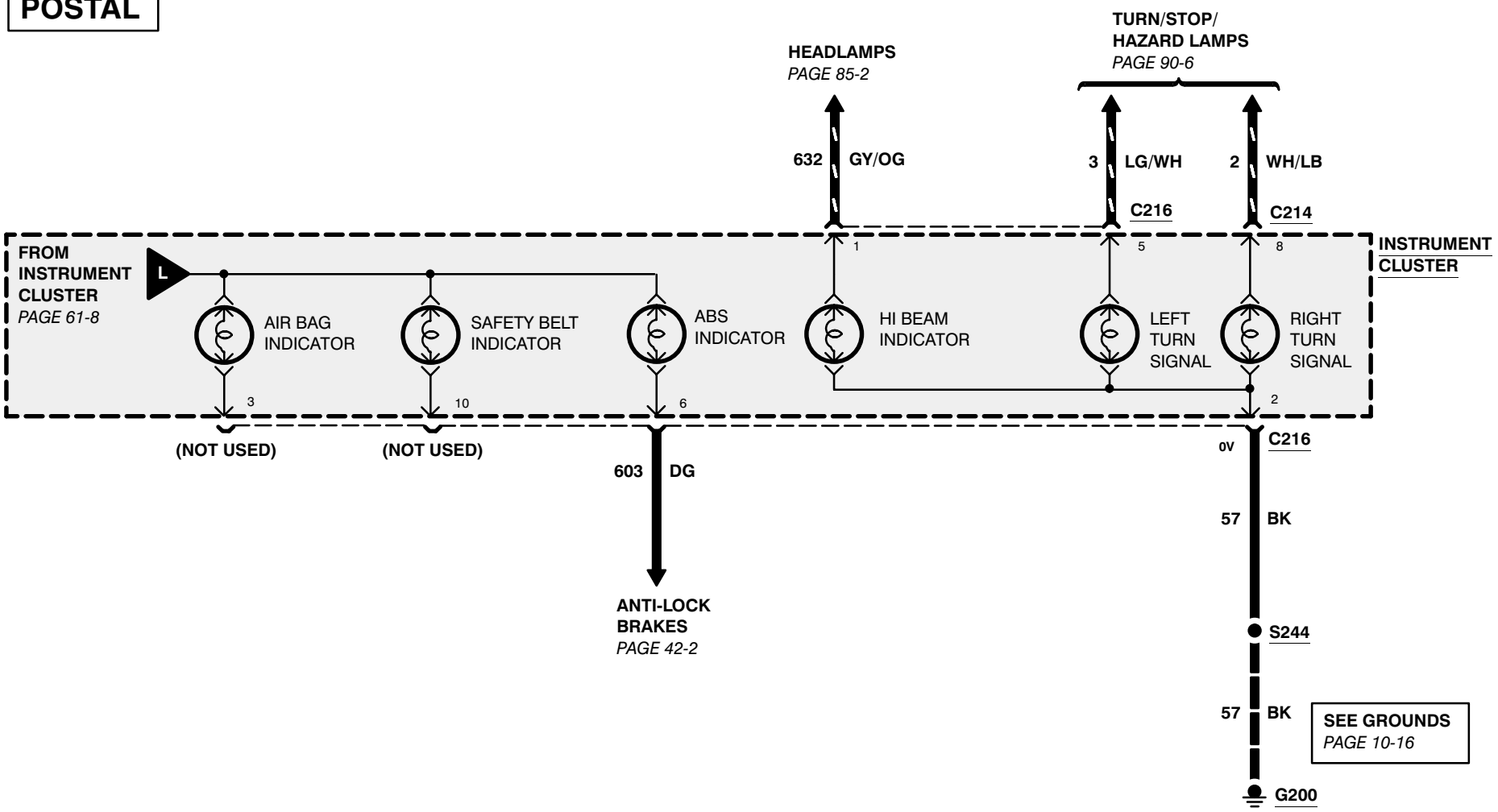
POSTAL



www.AUTOMOTIVEMECHANIC.ORG

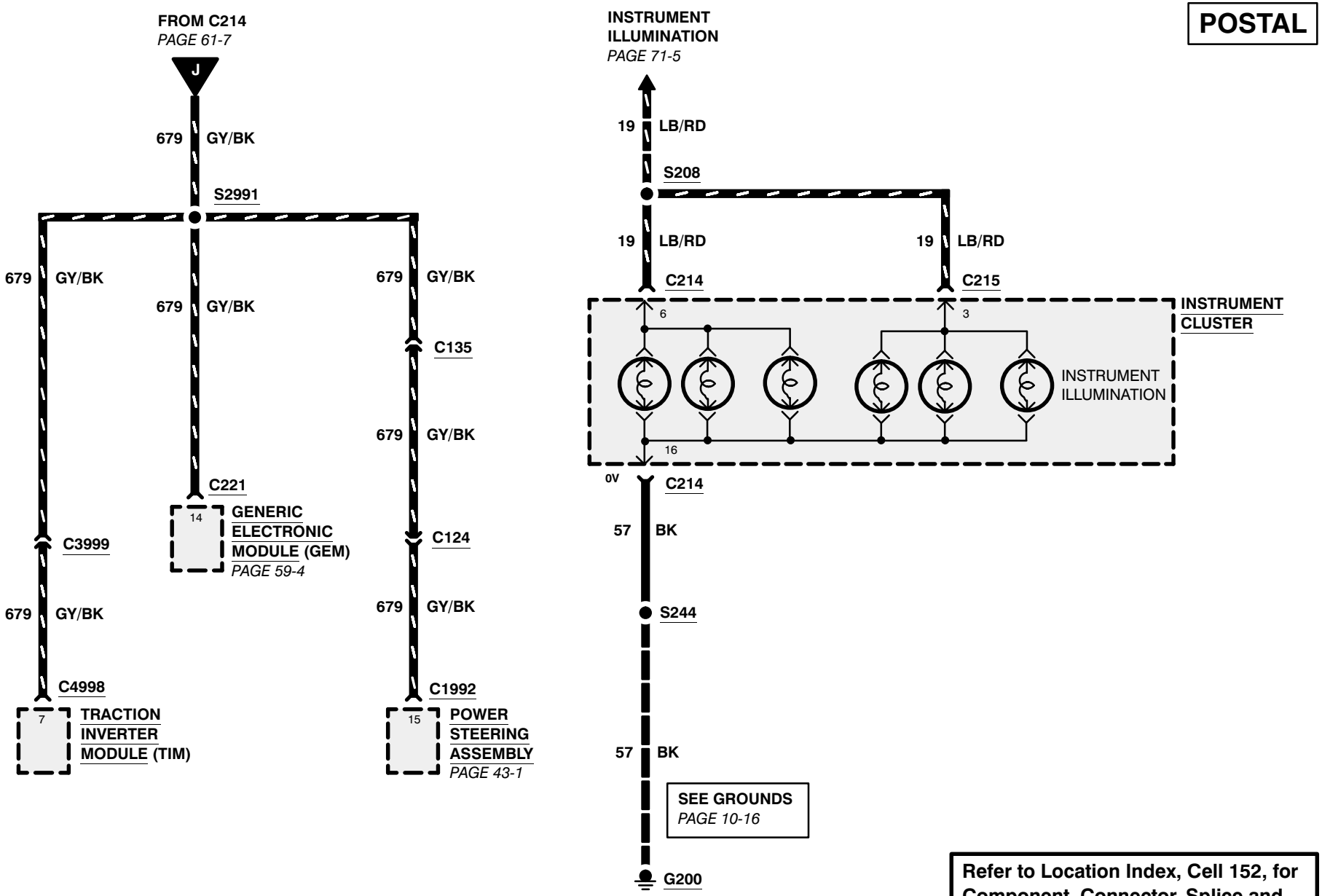
61-9 INSTRUMENT CLUSTER

POSTAL



www.AUTOMOTIVEMECHANIC.org

POSTAL

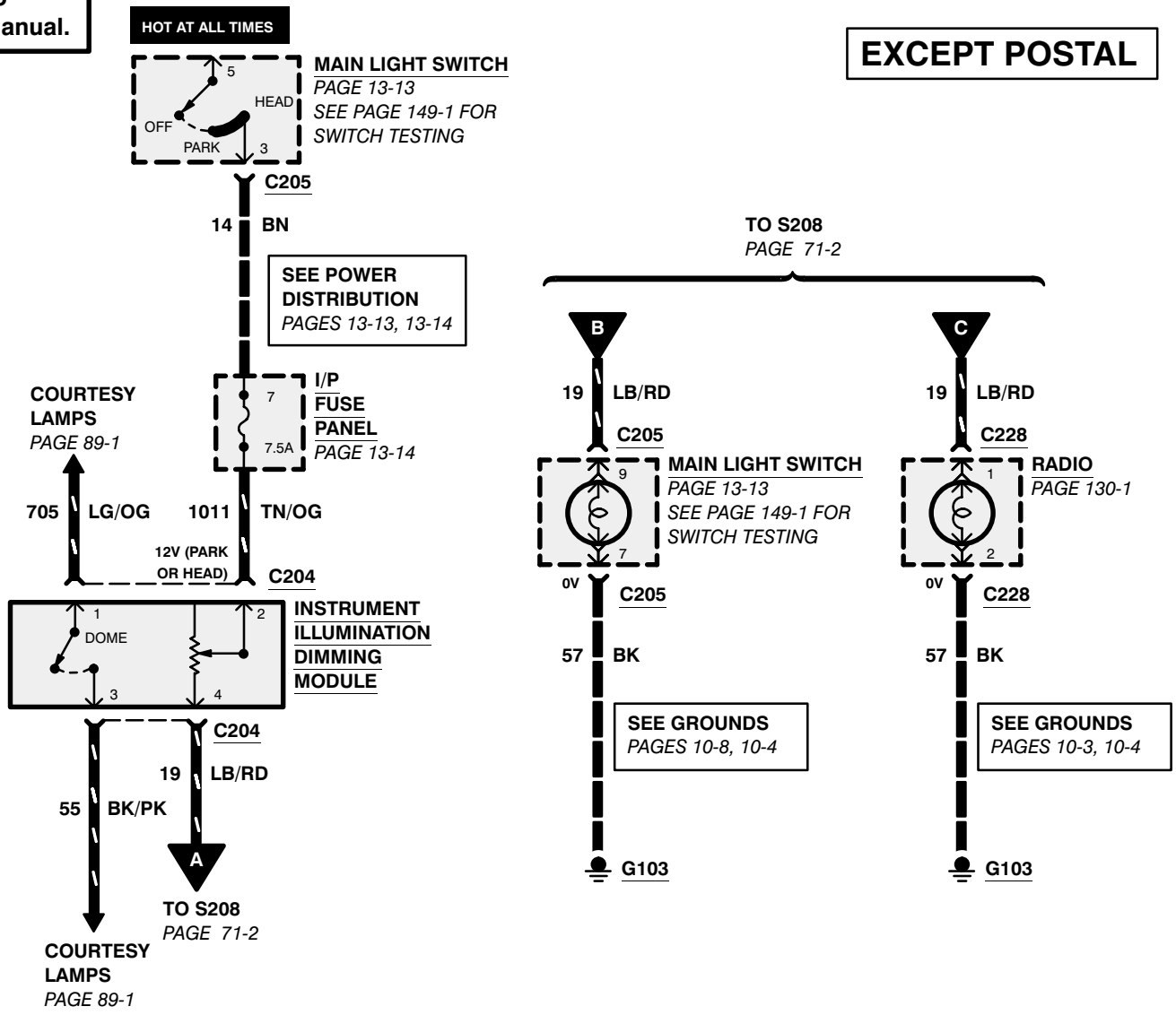


Refer to Location Index, Cell 152, for Component, Connector, Splice and Ground descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

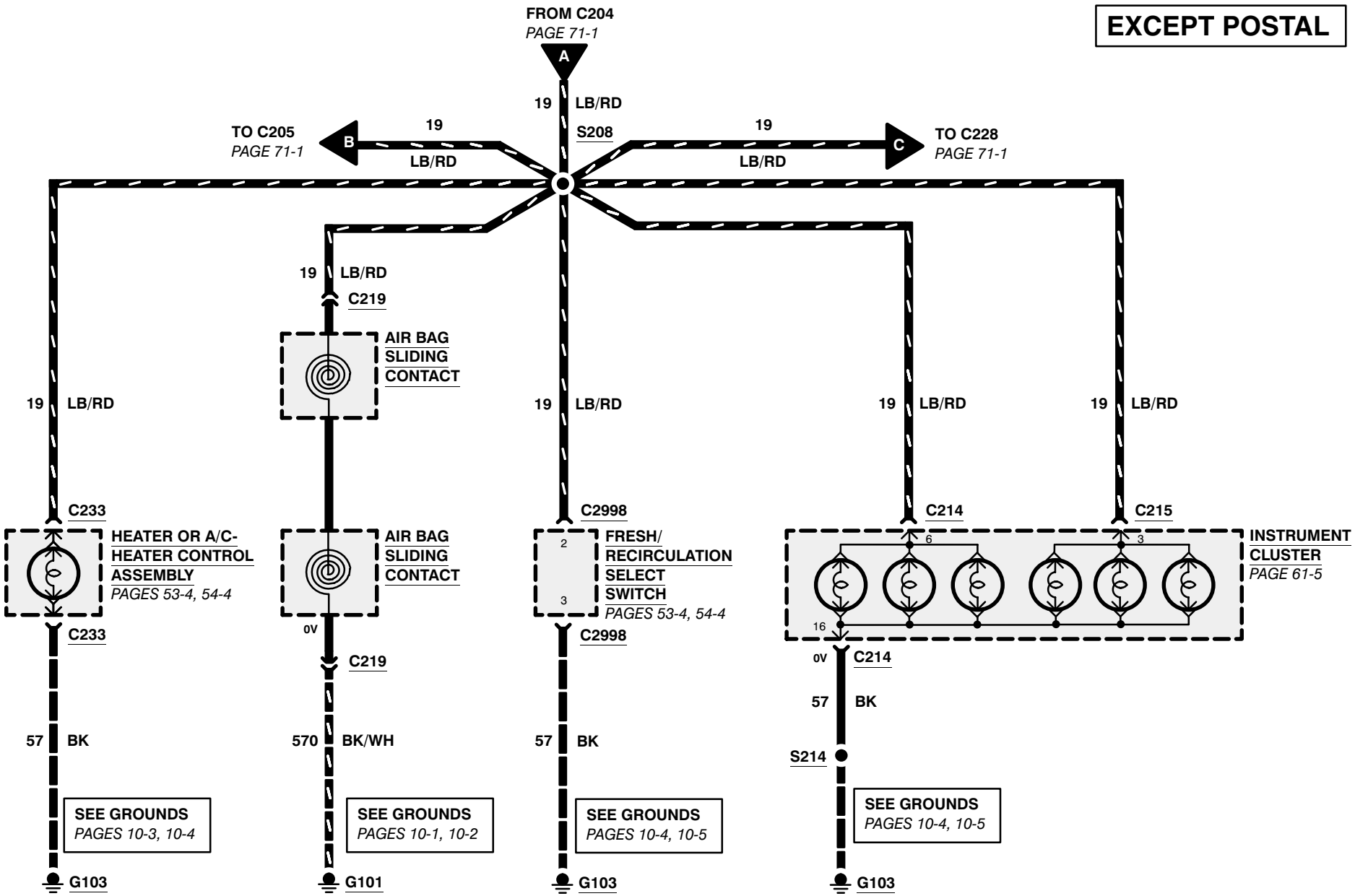
71-1 INSTRUMENT ILLUMINATION

For diagnostic information, refer to Section 413-00 of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.org

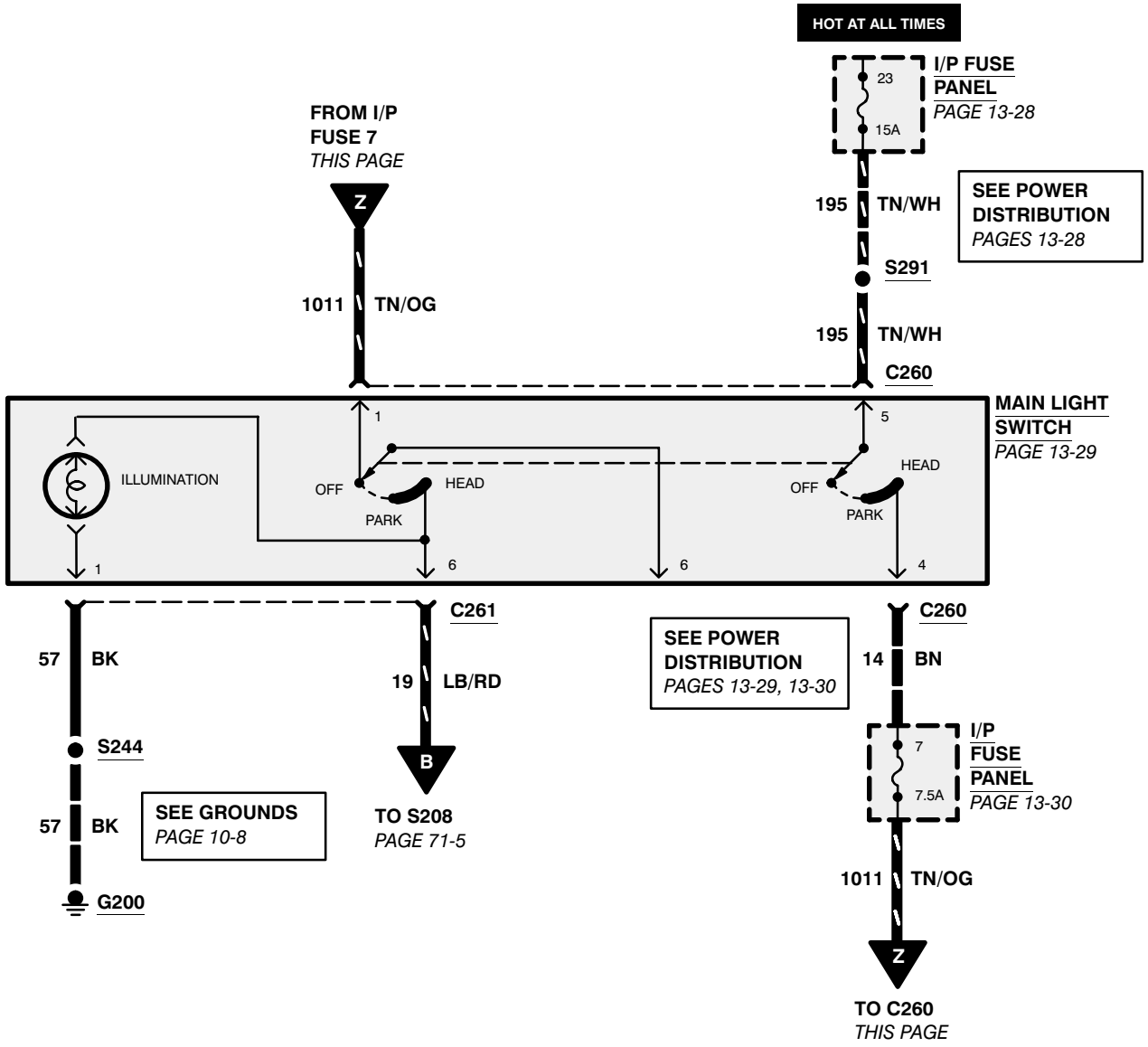
EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

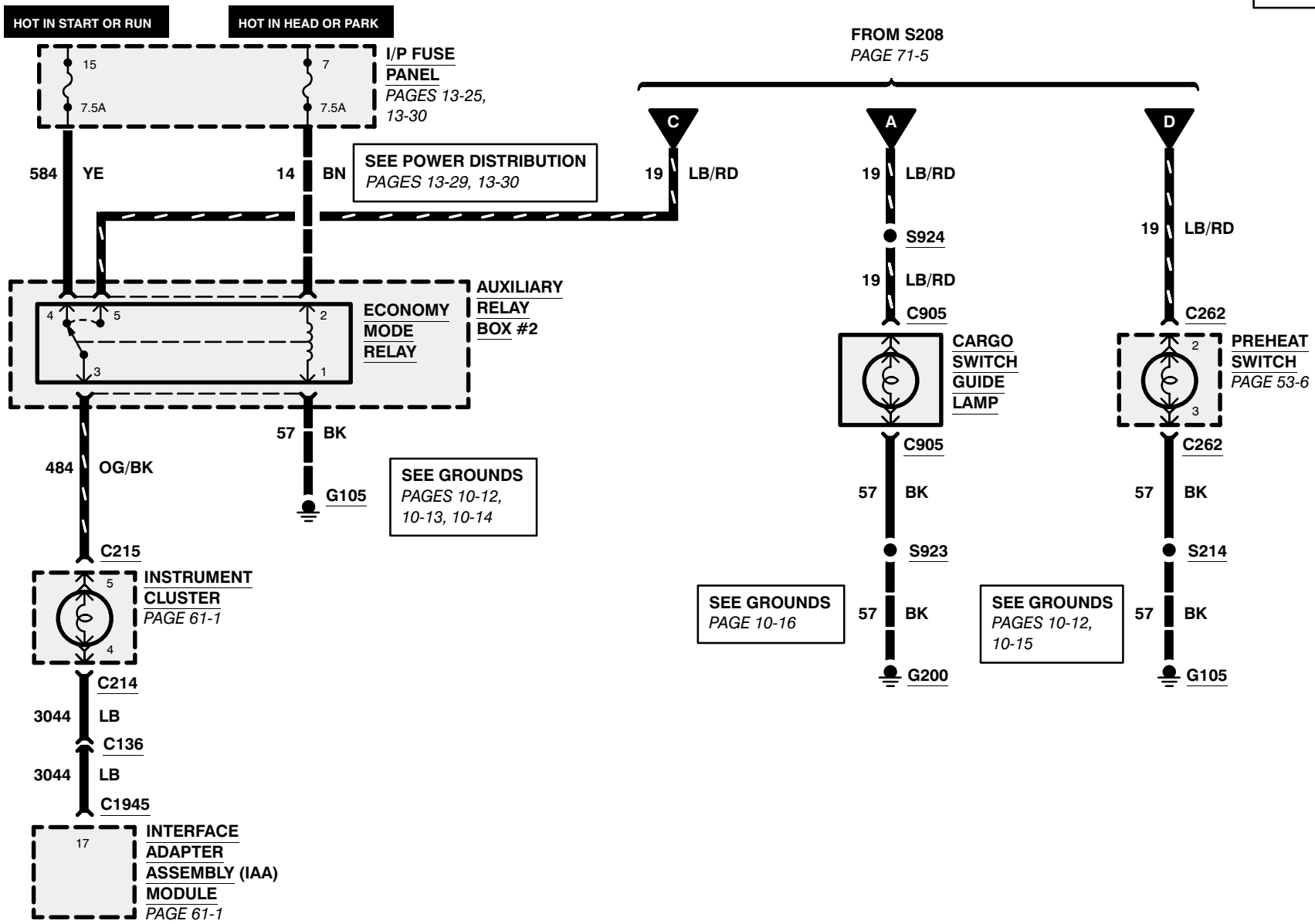
71-3 INSTRUMENT ILLUMINATION

POSTAL



www.AUTOMOTIVEMECHANIC.org

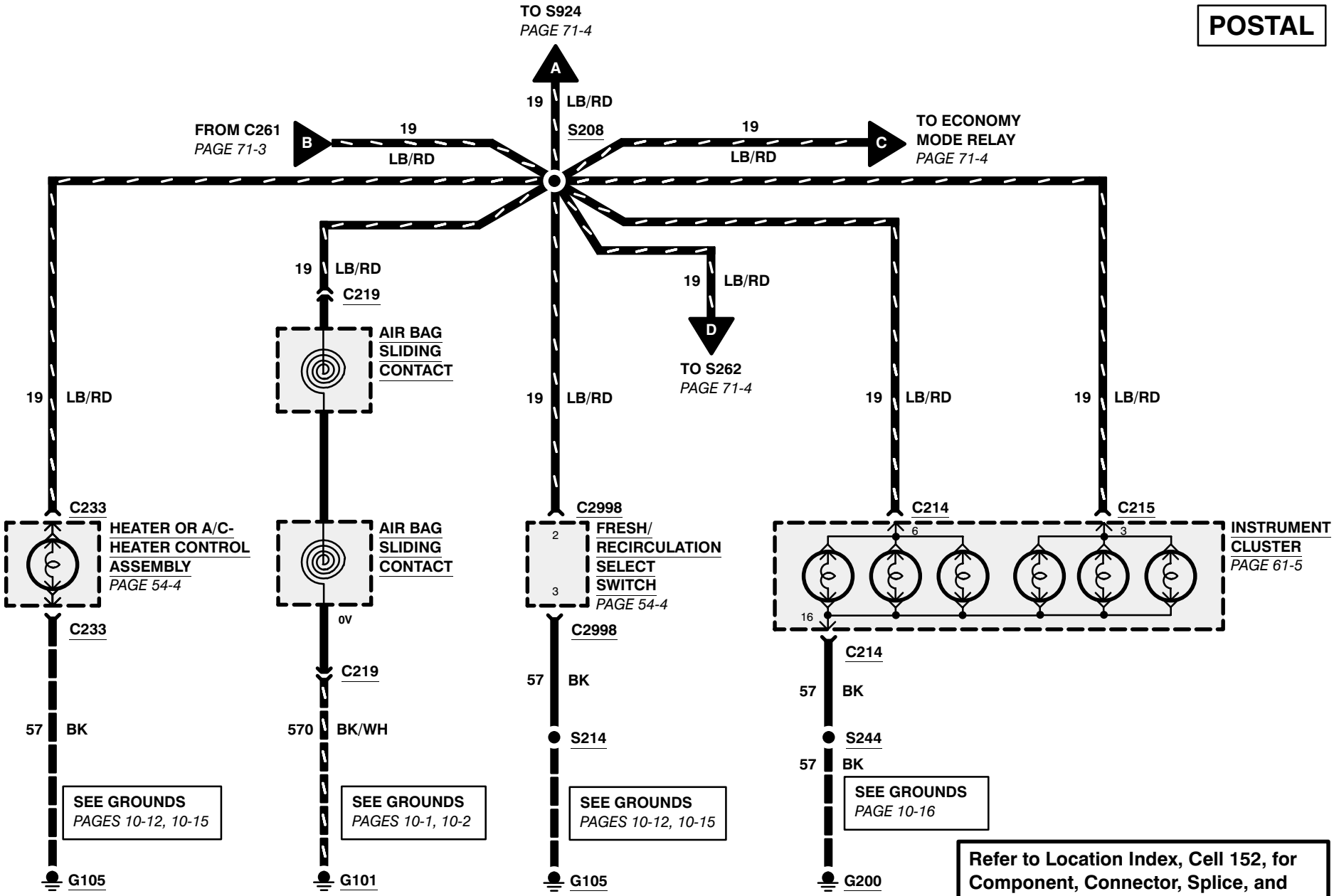
POSTAL



www.AUTOMOTIVEMECHANIC.org

71-5 INSTRUMENT ILLUMINATION

POSTAL



Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

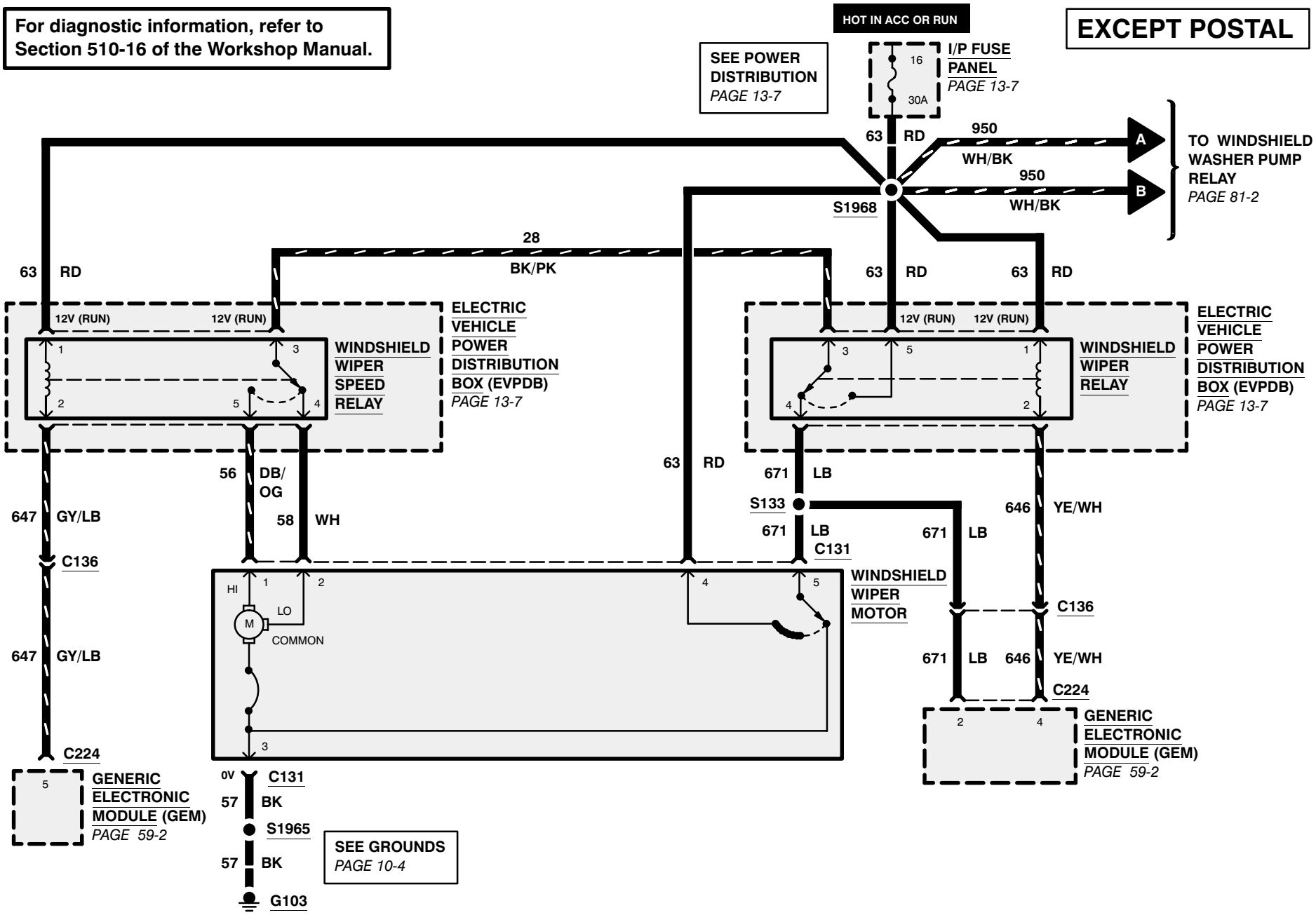
www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

81-1 INTERVAL WIPER/WASHER

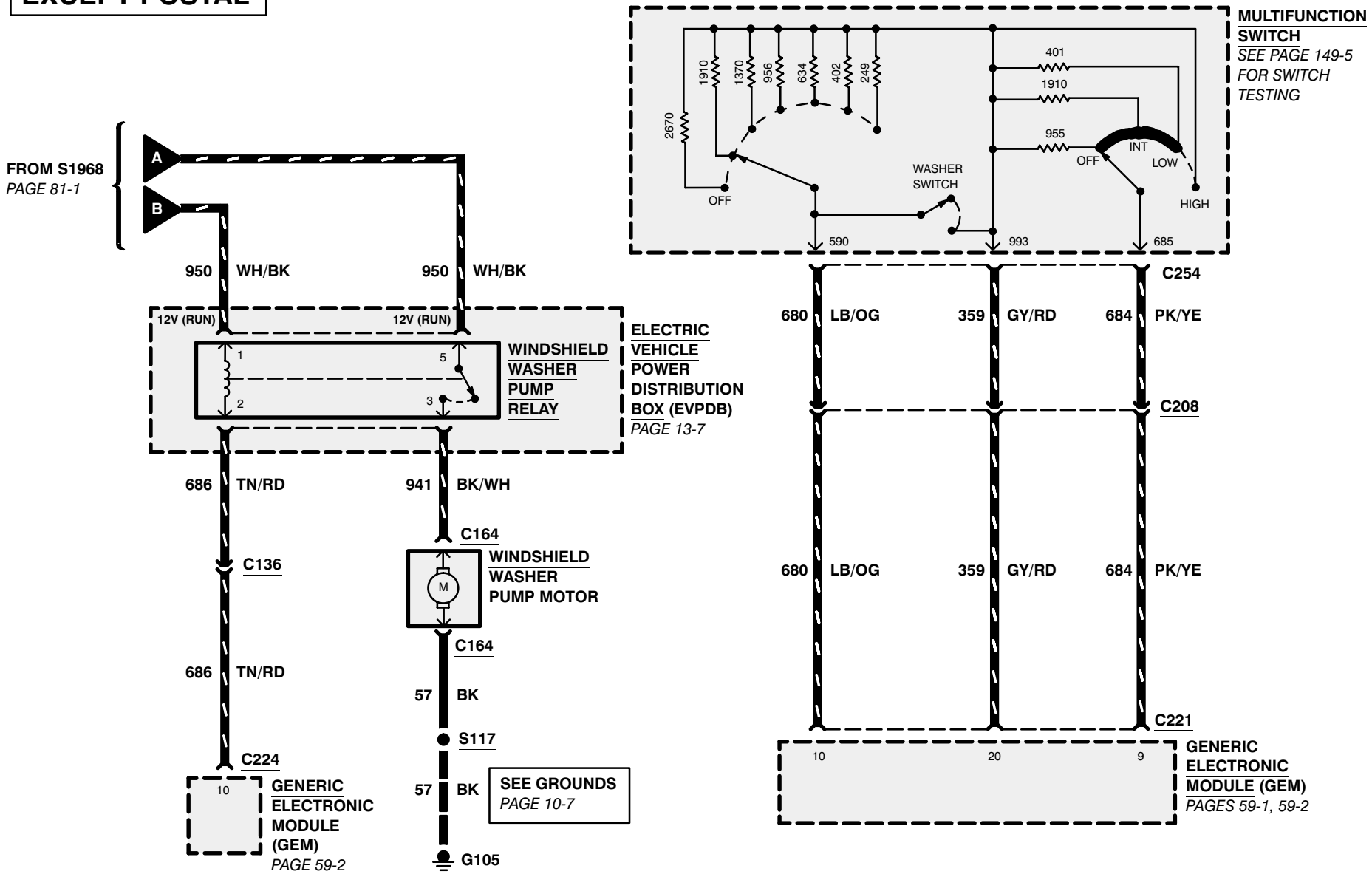
For diagnostic information, refer to Section 510-16 of the Workshop Manual.

EXCEPT POSTAL



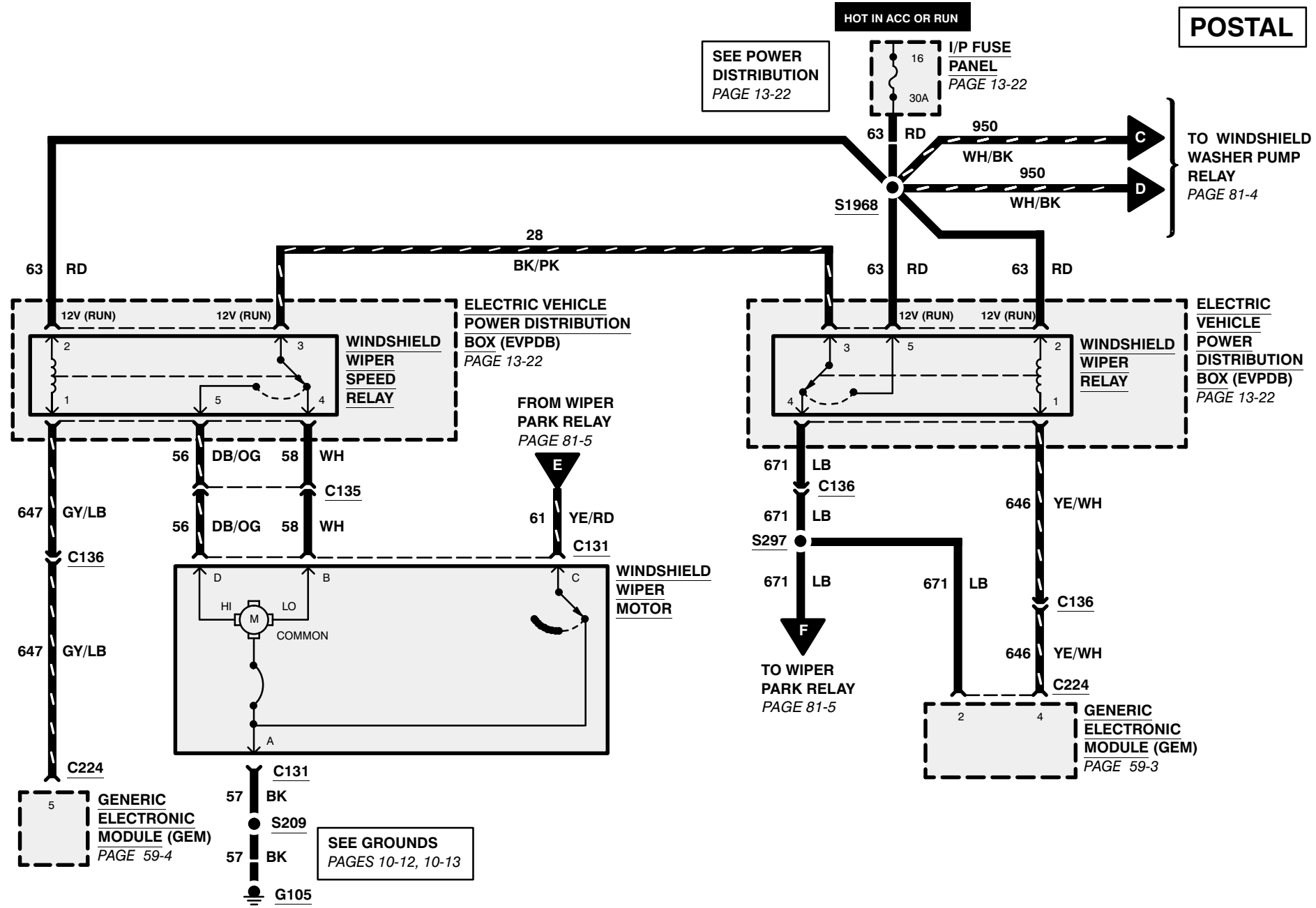
www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL



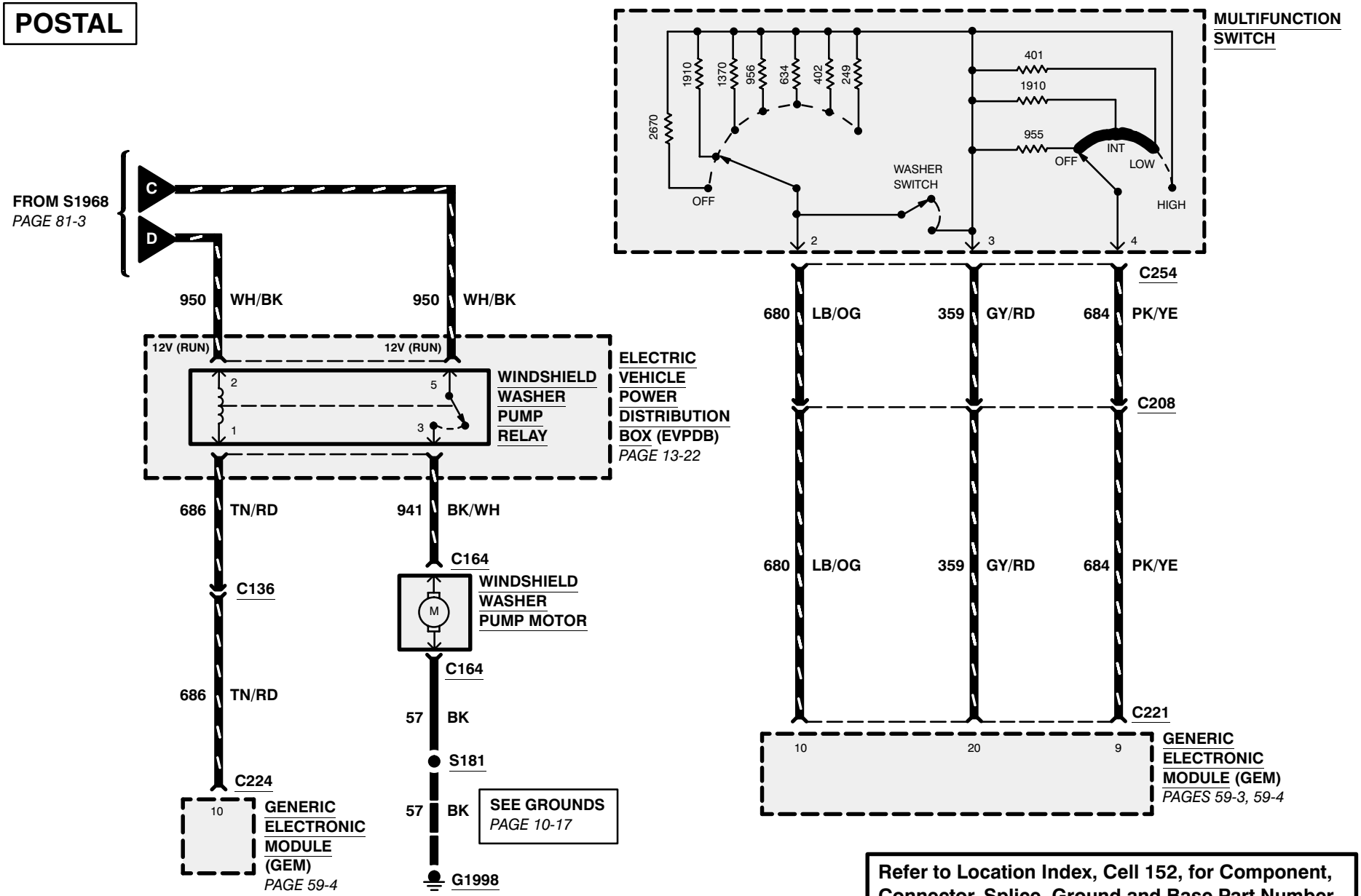
www.AUTOMOTIVEMECHANIC.org

81-3 INTERVAL WIPER/WASHER



www.AUTOMOTIVEMECHANIC.org

POSTAL

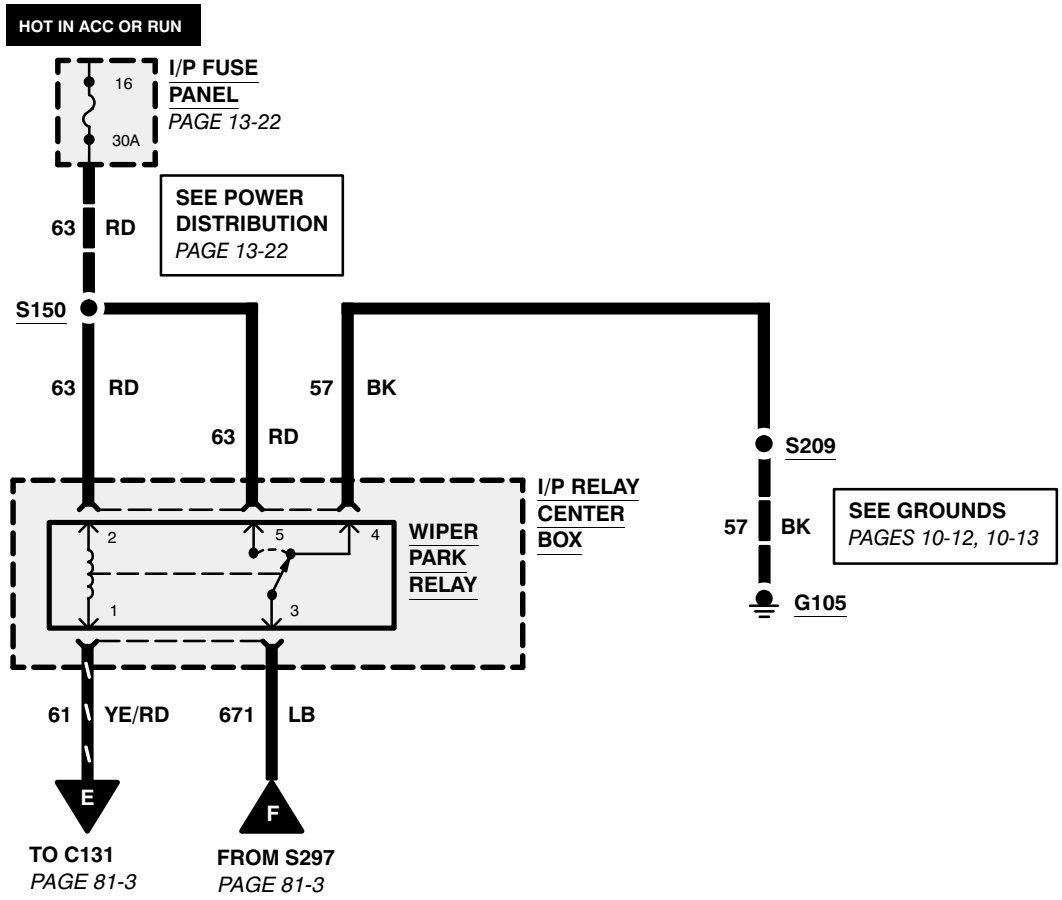


Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

81-5 INTERVAL WIPER/WASHER

POSTAL



www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVE MECHANIC.ORG

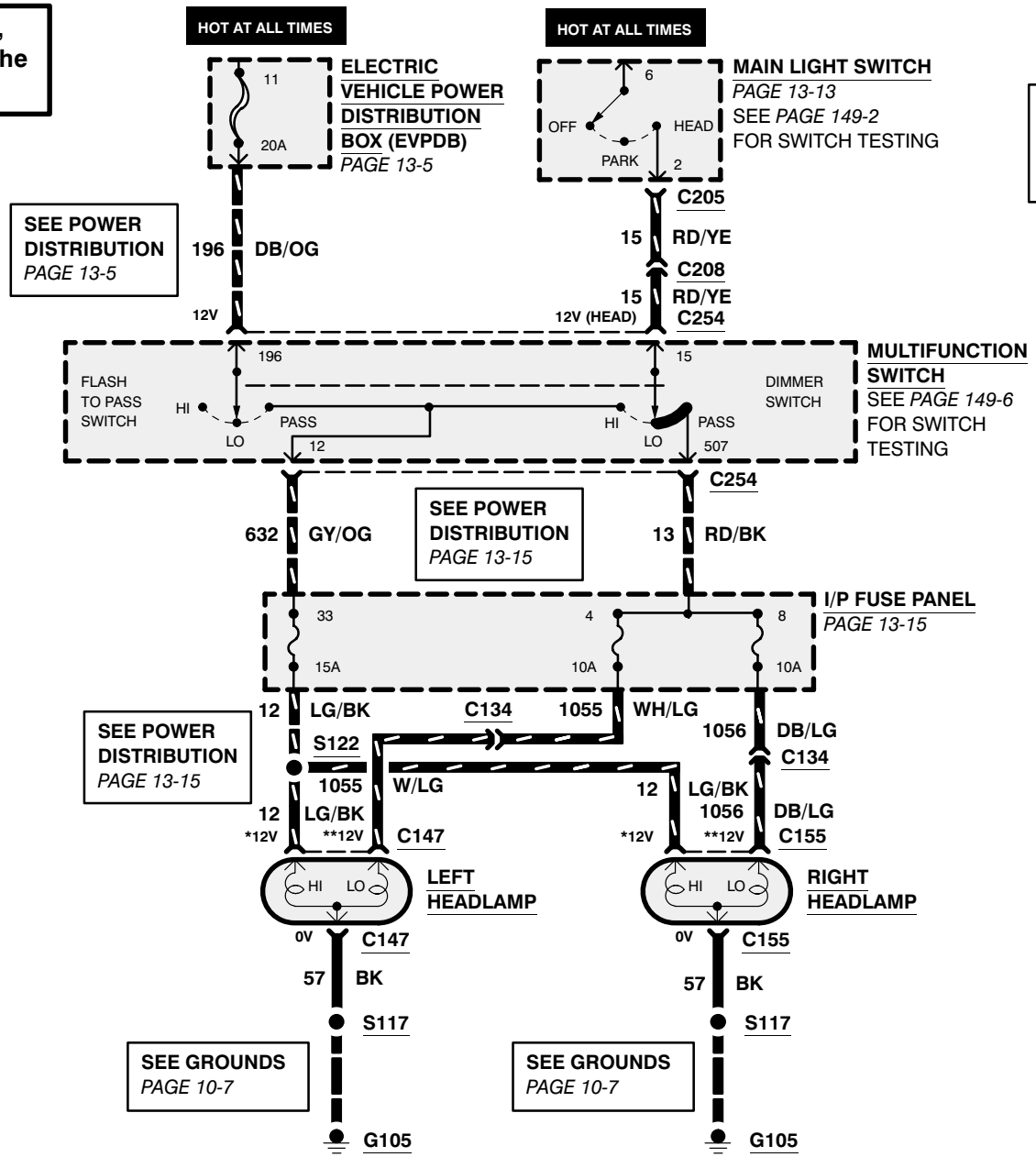
85-1 HEADLAMPS

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 417-01 of the Workshop Manual.

EXCEPT POSTAL

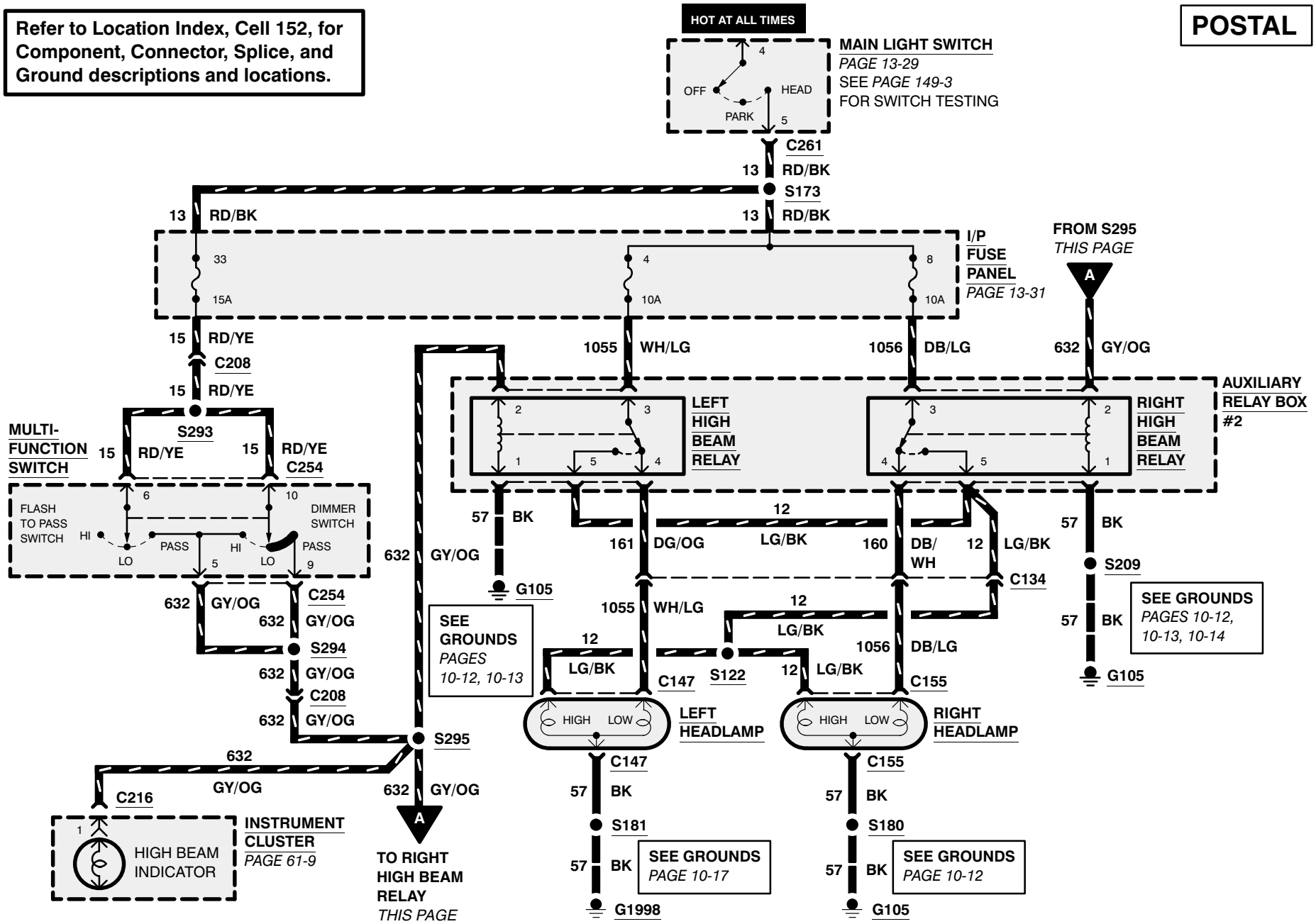
* WITH MULTIFUNCTION SWITCH IN HIGH OR PASS
** WITH MULTIFUNCTION SWITCH IN LOW



www.AUTOMOTIVEMECHANIC.org

Refer to Location Index, Cell 152, for Component, Connector, Splice, and Ground descriptions and locations.

POSTAL

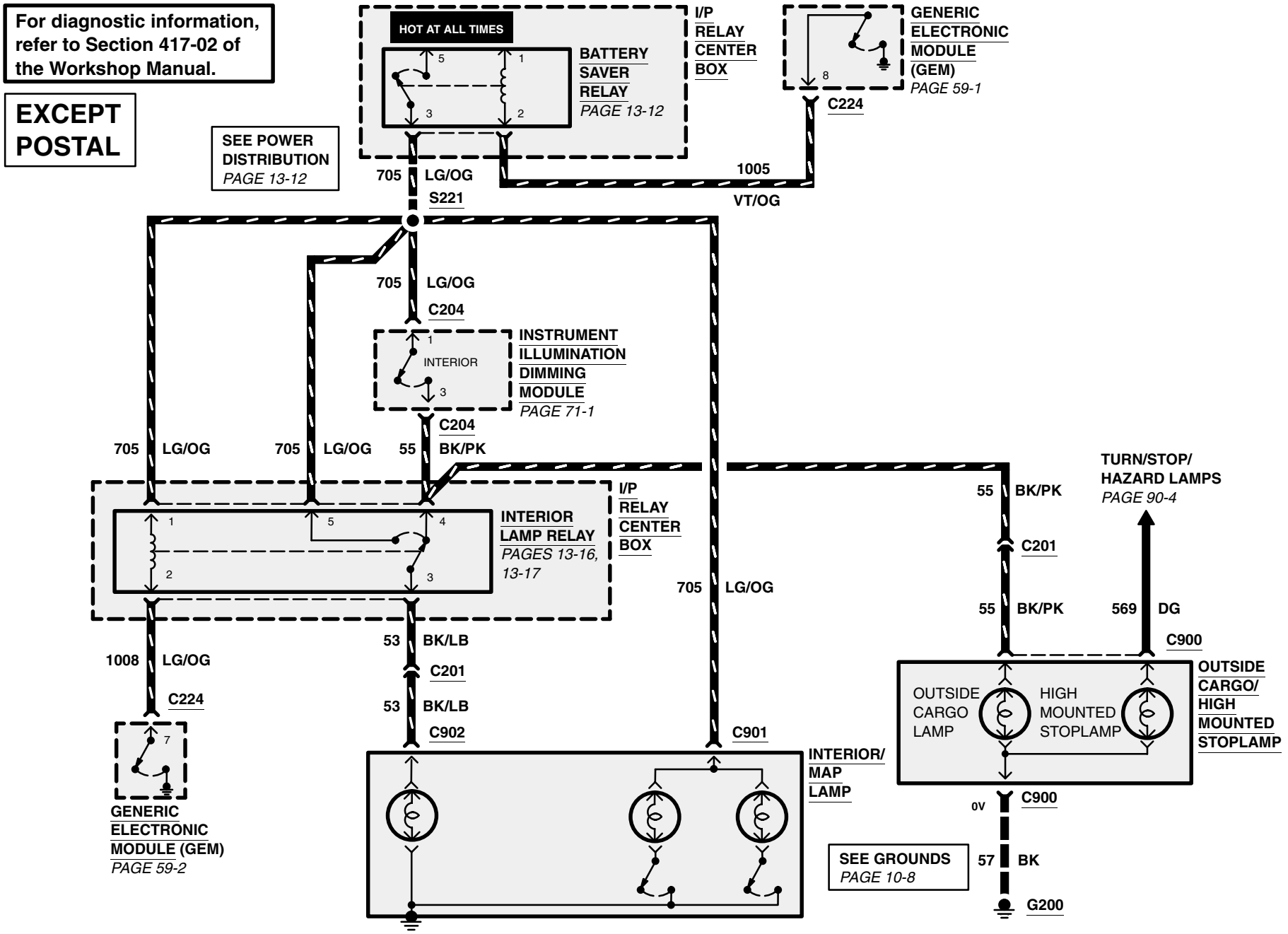


www.AUTOMOTIVE MECHANIC.ORG

89-1 COURTESY LAMPS

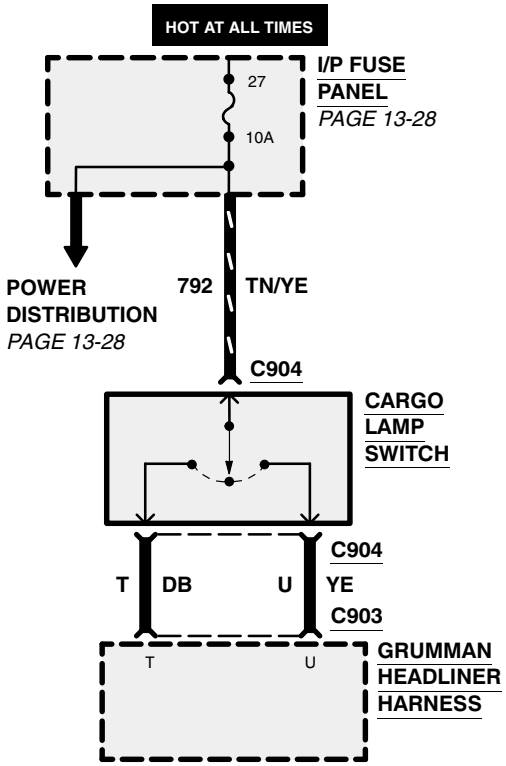
For diagnostic information, refer to Section 417-02 of the Workshop Manual.

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

POSTAL



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

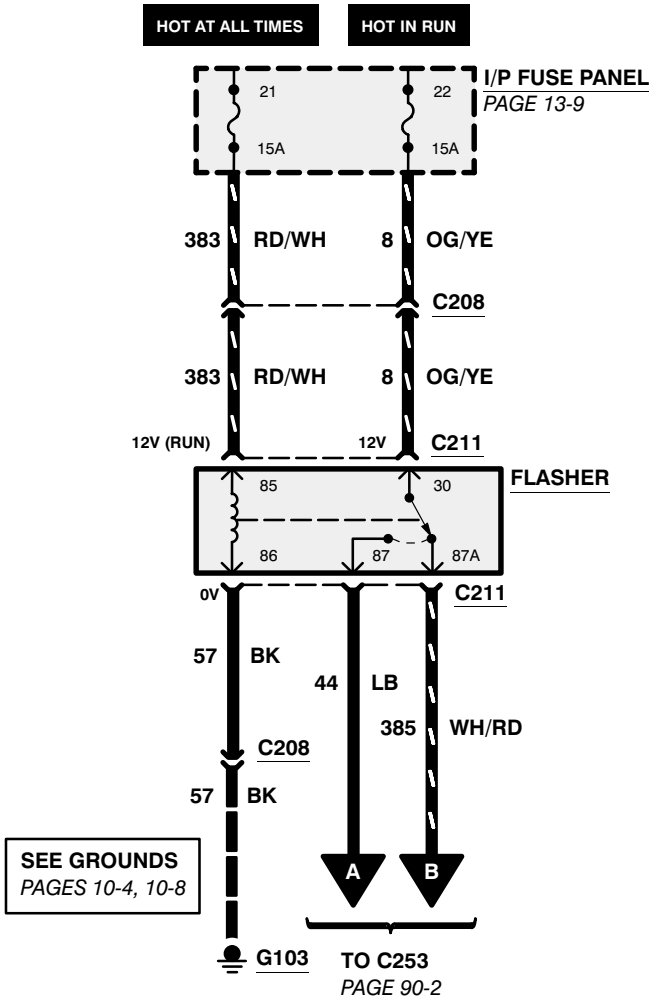
www.AUTOMOTIVE MECHANIC.ORG

90-1 TURN/STOP/HAZARD LAMPS

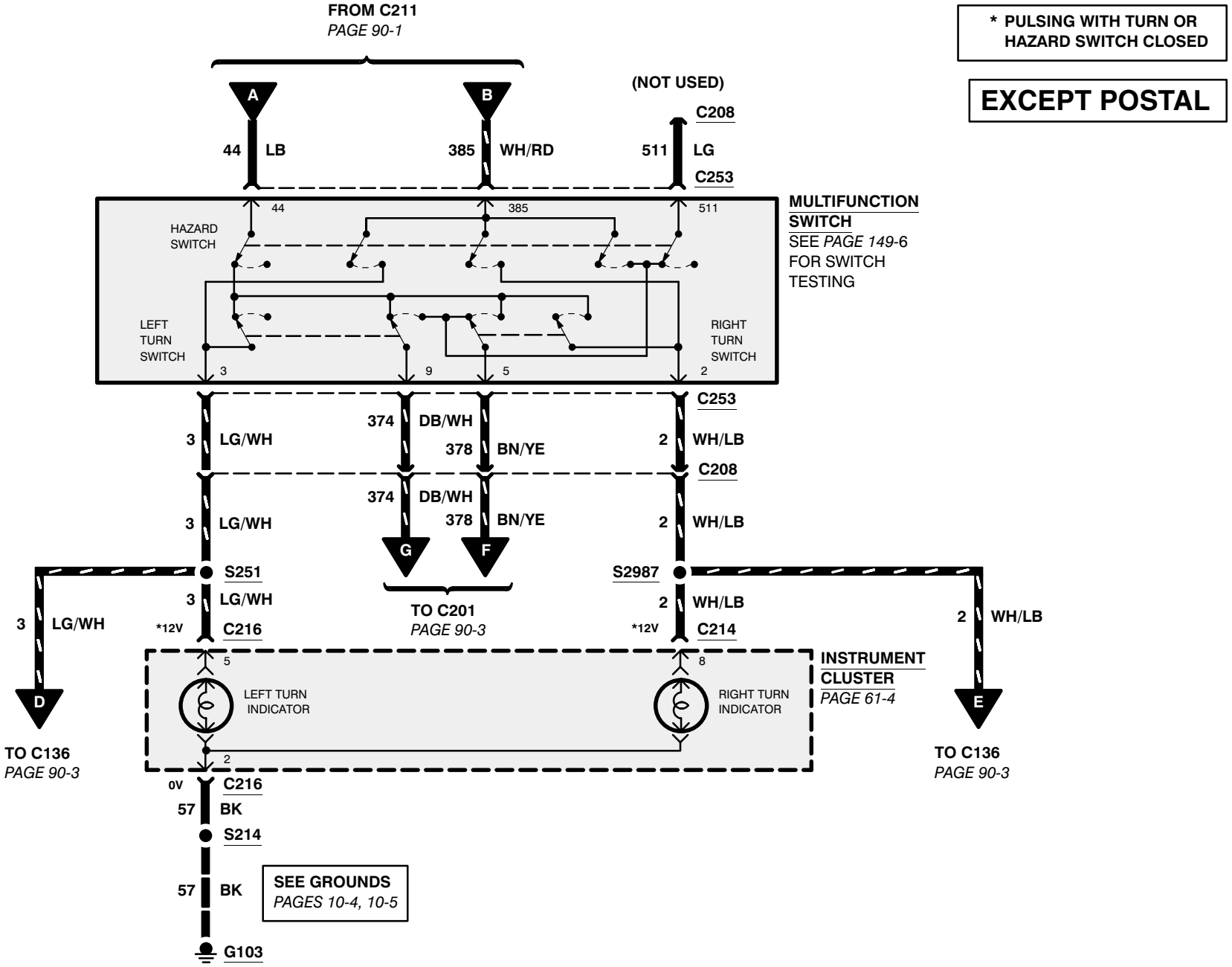
2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 417-01 of the Workshop Manual.

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

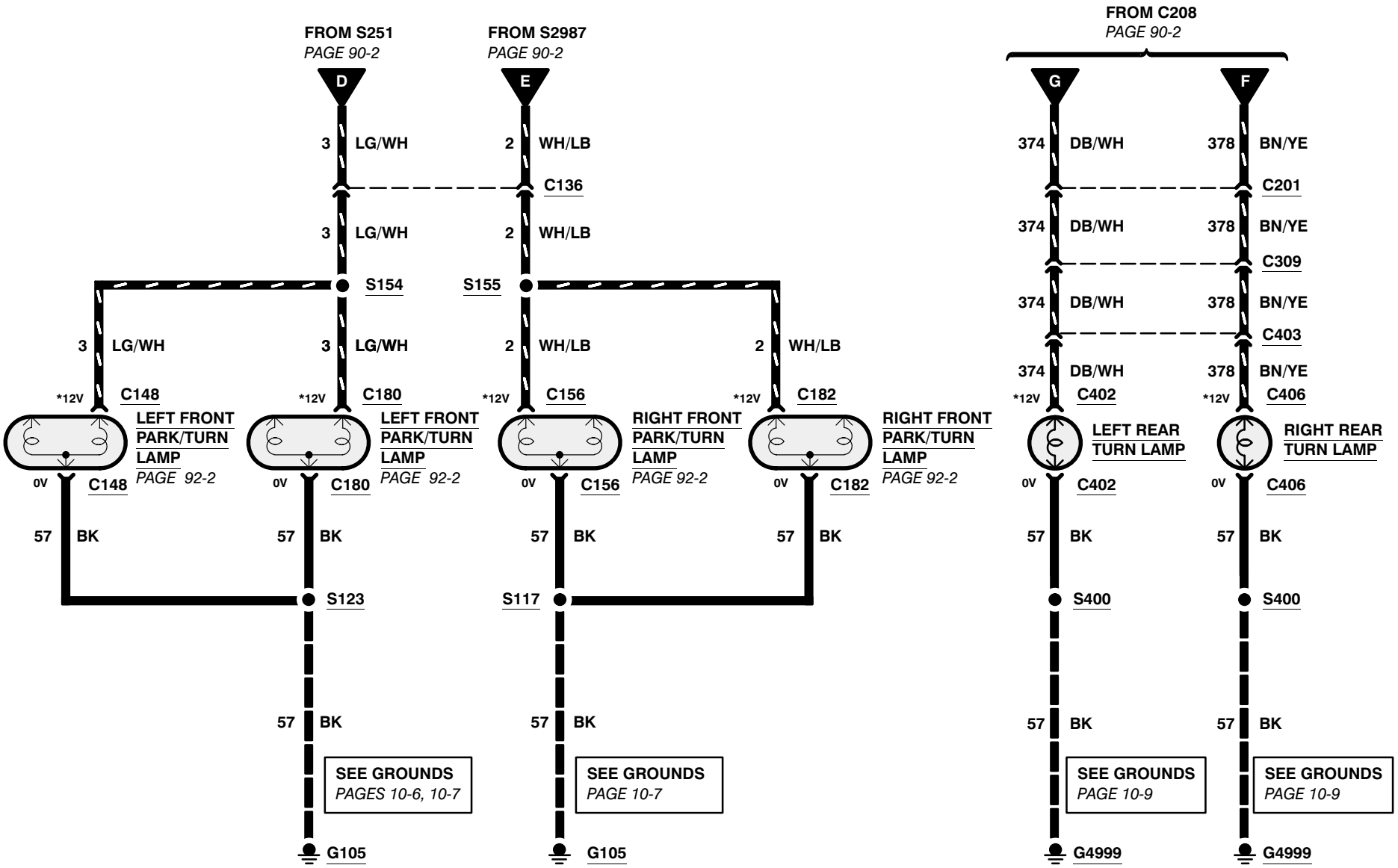


www.AUTOMOTIVEMECHANIC.org

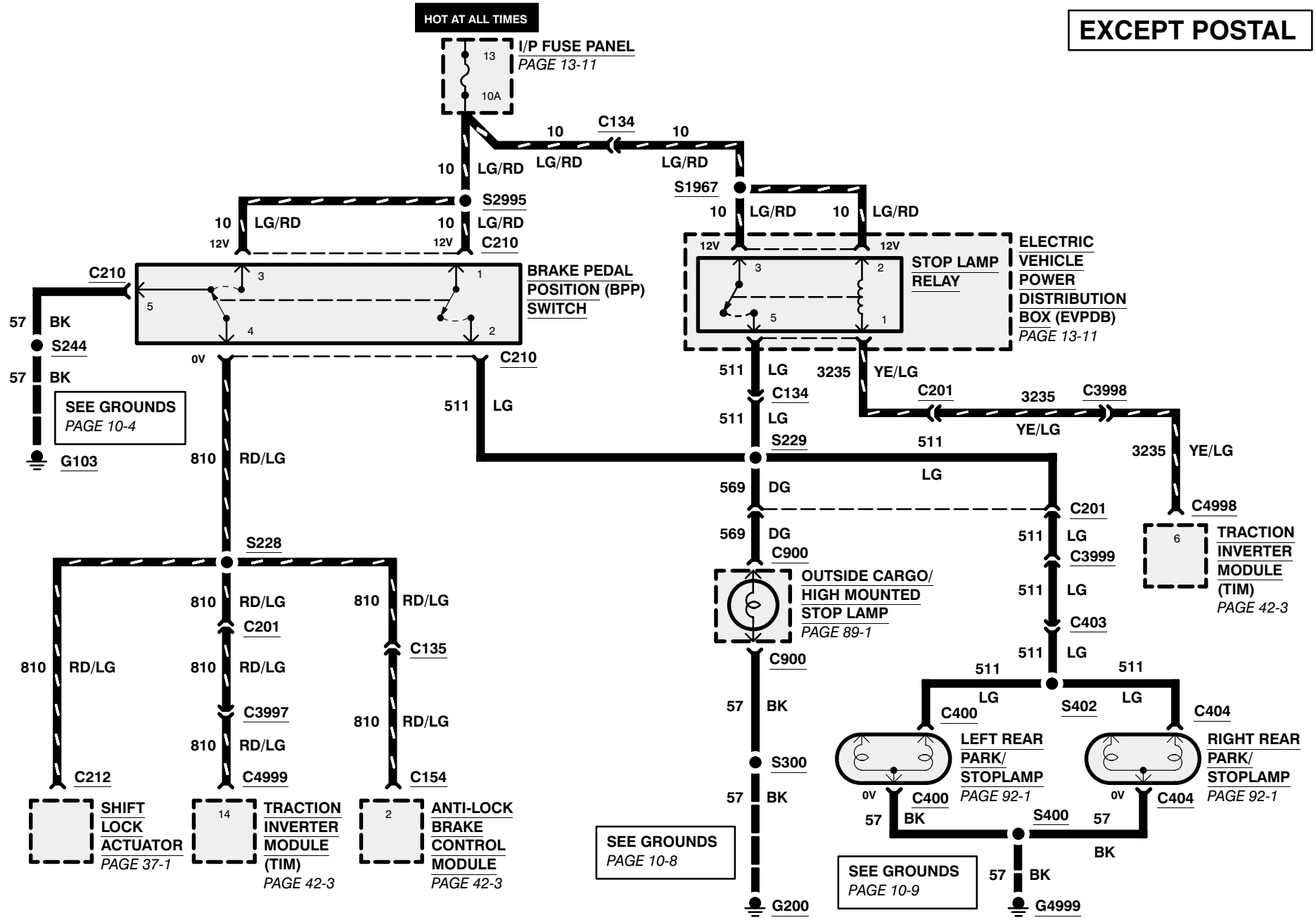
90-3 TURN/STOP/HAZARD LAMPS

EXCEPT POSTAL

* PULSING WITH TURN OR HAZARD SWITCH CLOSED



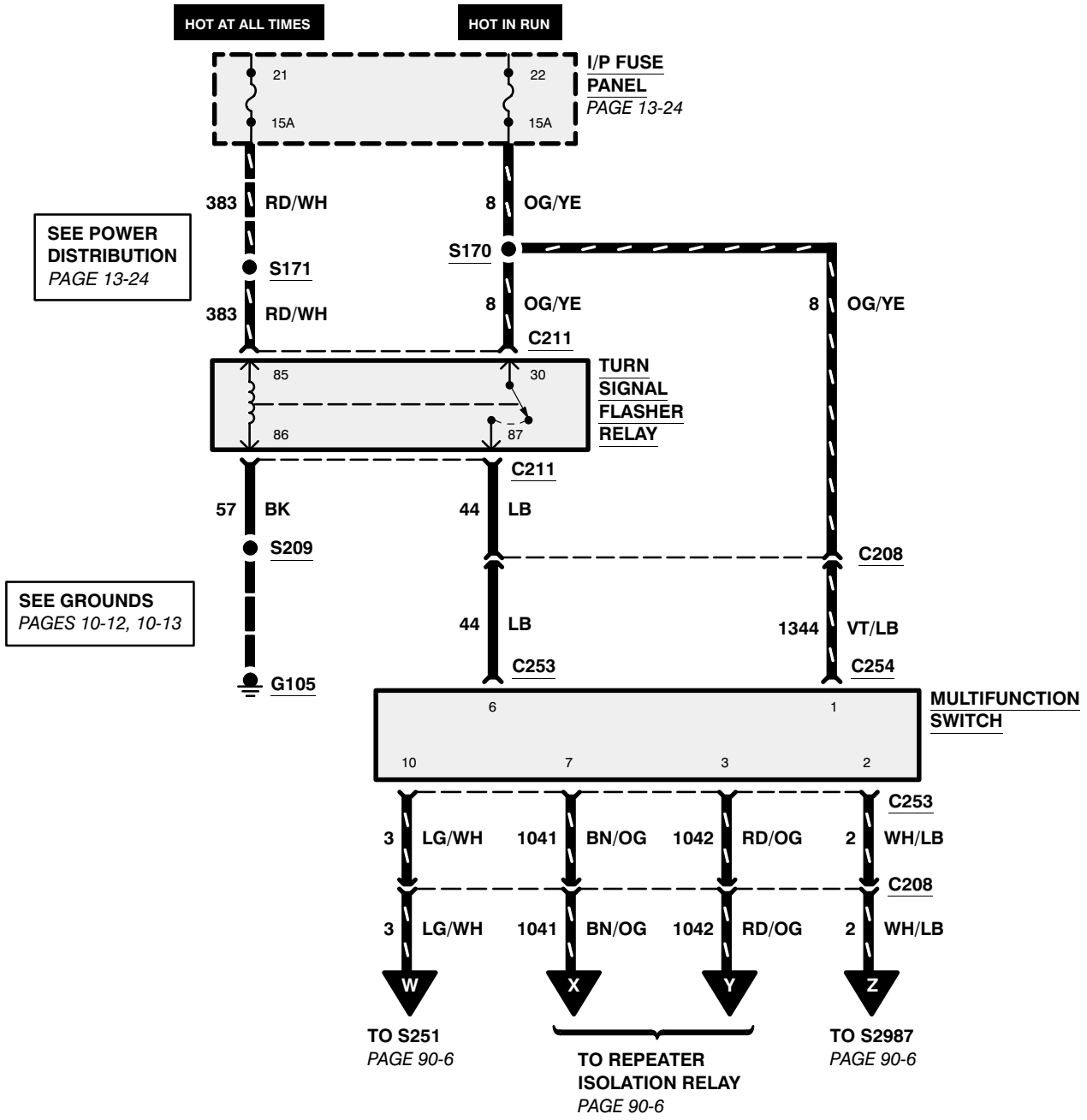
www.AUTOMOTIVE MECHANIC.ORG



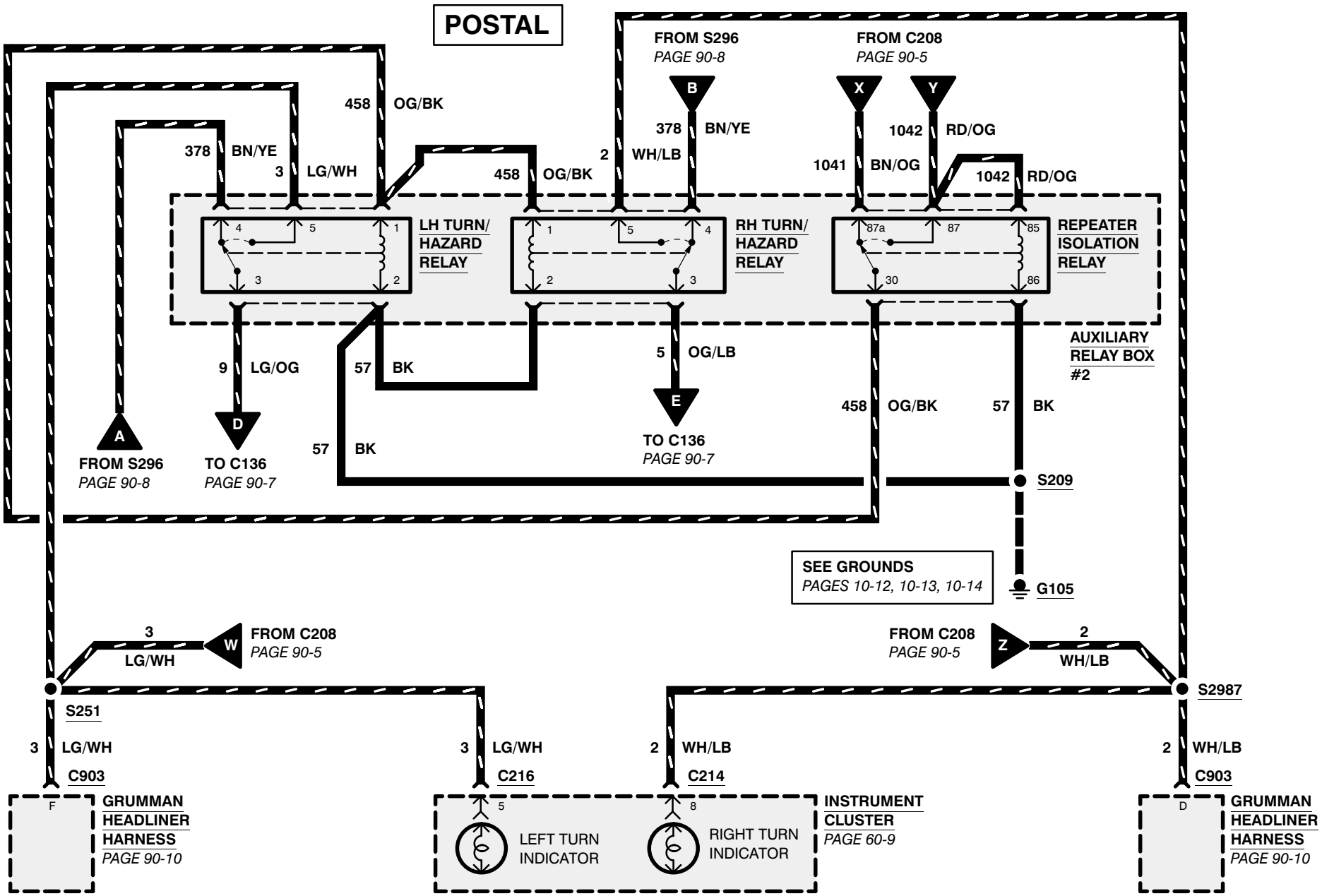
www.AUTOMOTIVEMECHANIC.ORG

90-5 TURN/STOP/HAZARD LAMPS

POSTAL



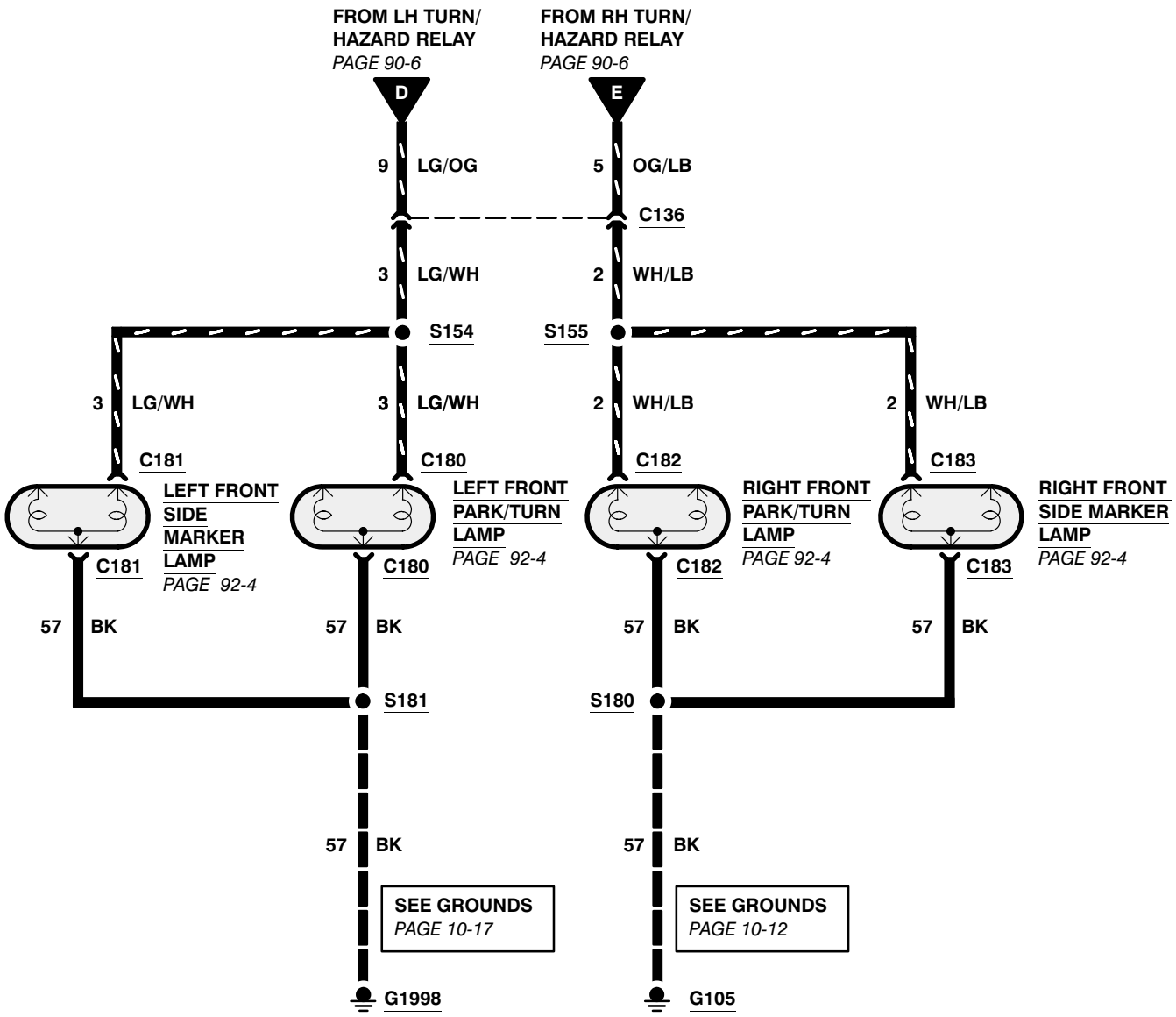
www.AUTOMOTIVEMECHANIC.org



www.AUTOMOTIVEMECHANIC.org

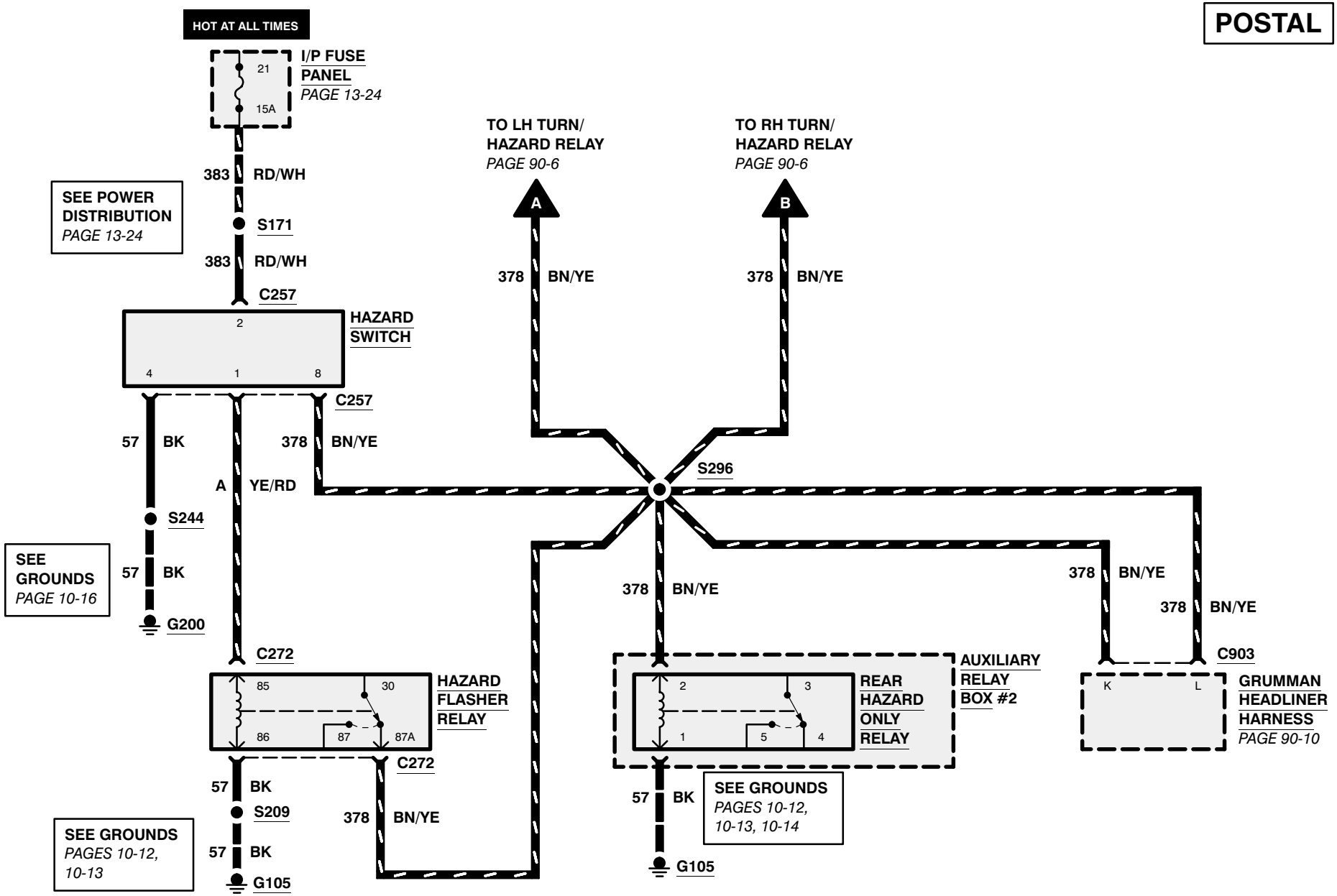
90-7 TURN/STOP/HAZARD LAMPS

POSTAL



www.AUTOMOTIVEMECHANIC.org

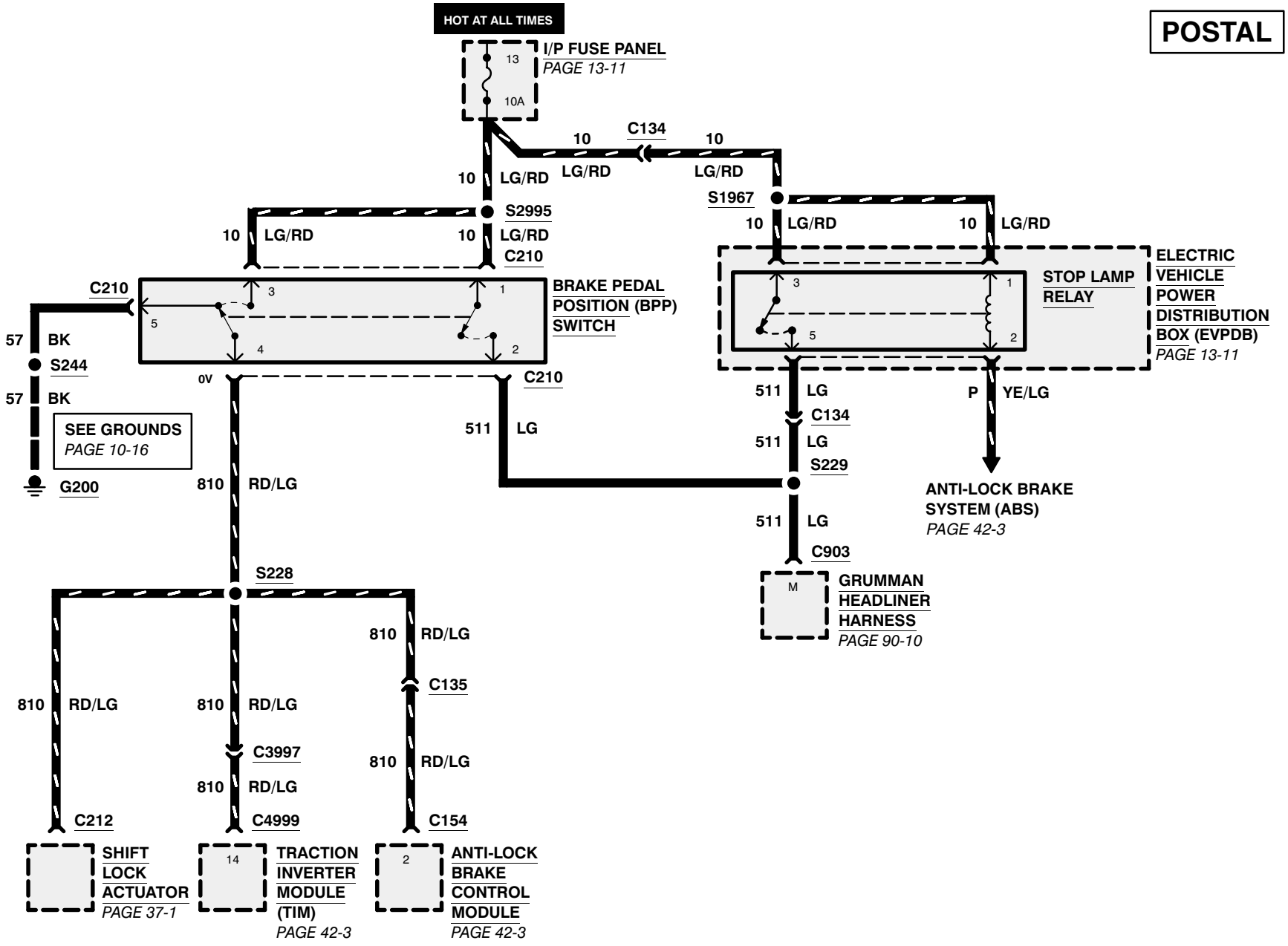
POSTAL



www.AUTOMOTIVEMECHANIC.ORG

90-9 TURN/STOP/HAZARD LAMPS

2001 RANGER ELECTRIC VEHICLE



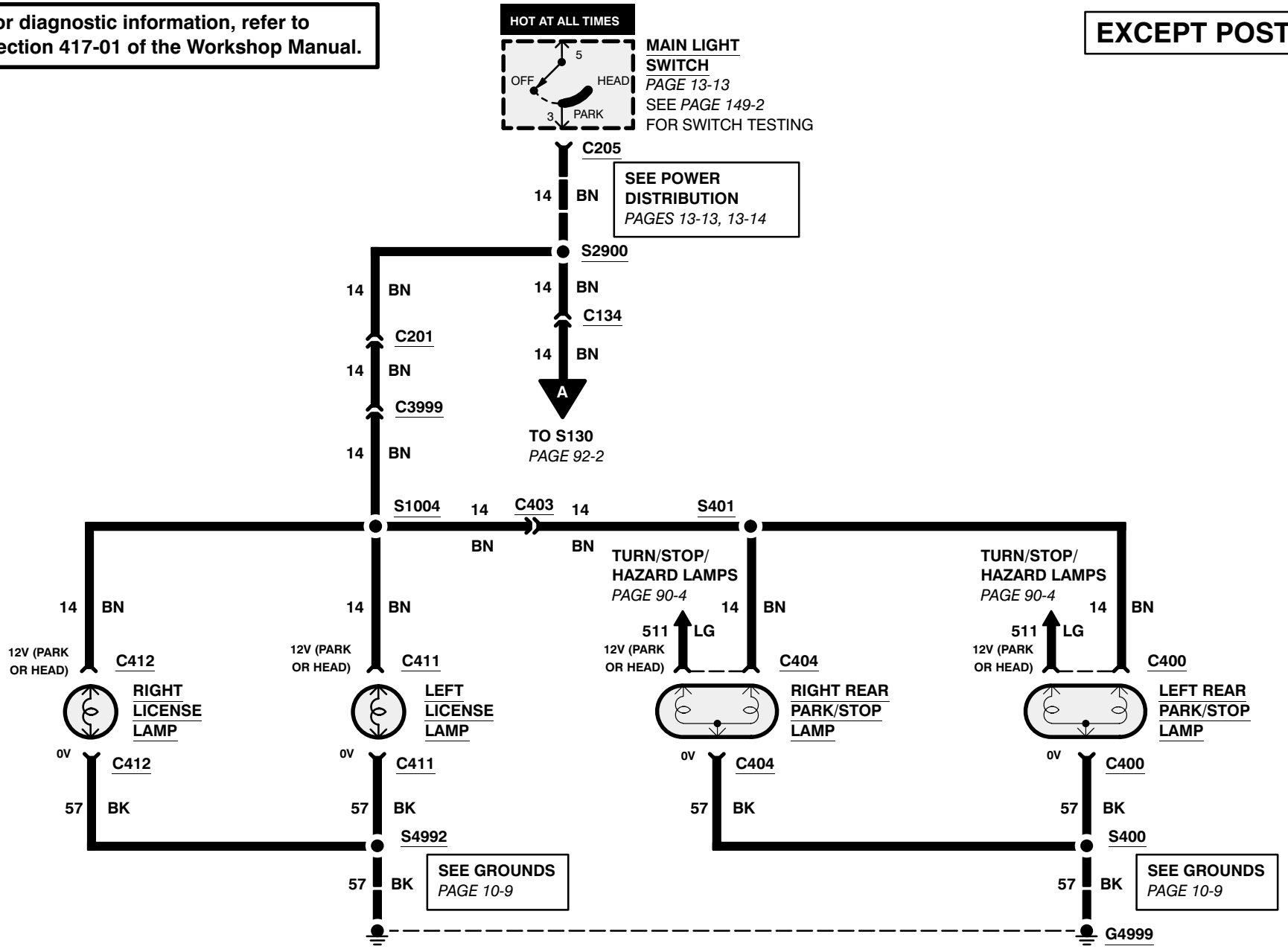
www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVE MECHANIC.ORG

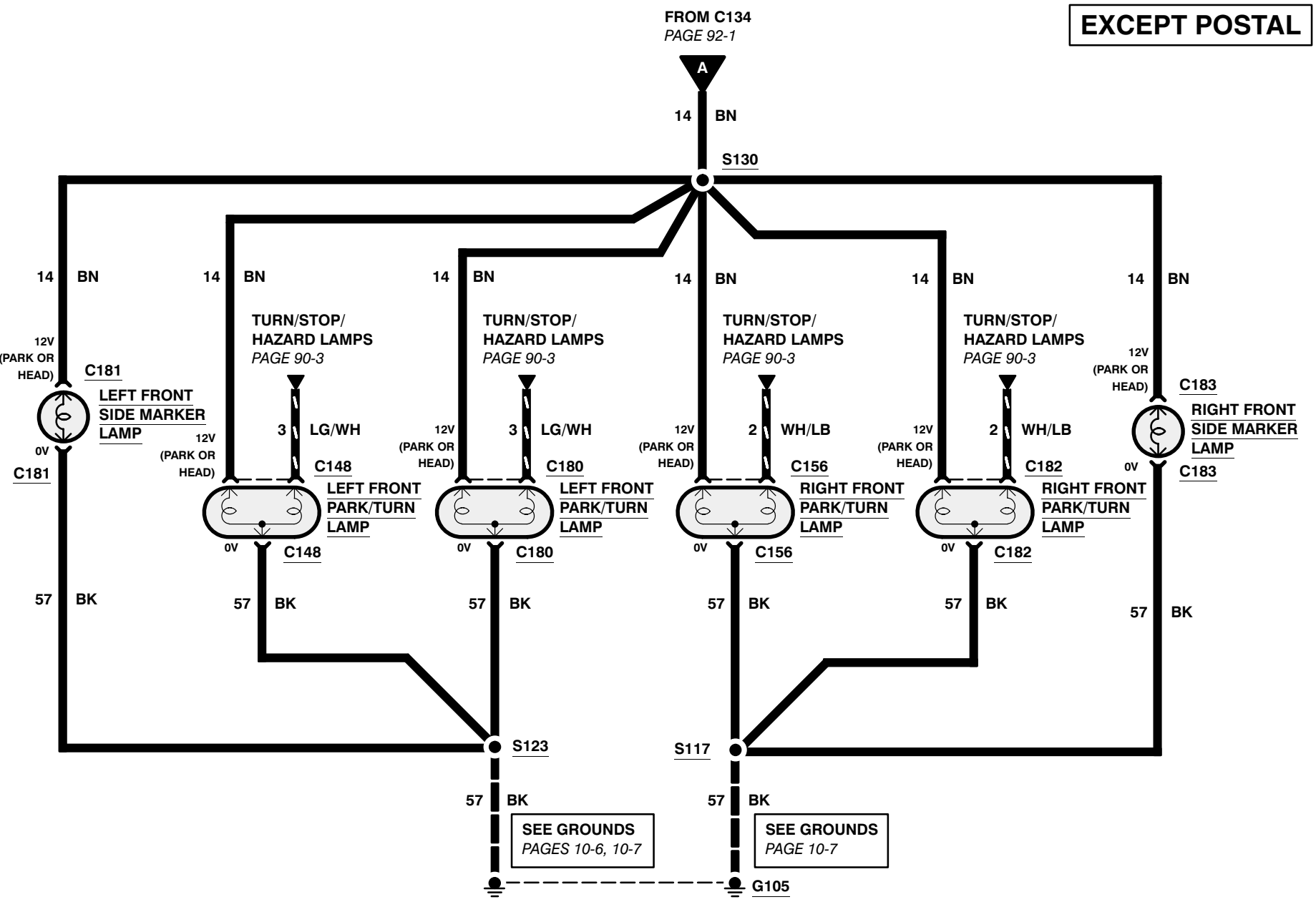
92-1 EXTERIOR LAMPS

For diagnostic information, refer to Section 417-01 of the Workshop Manual.

EXCEPT POSTAL



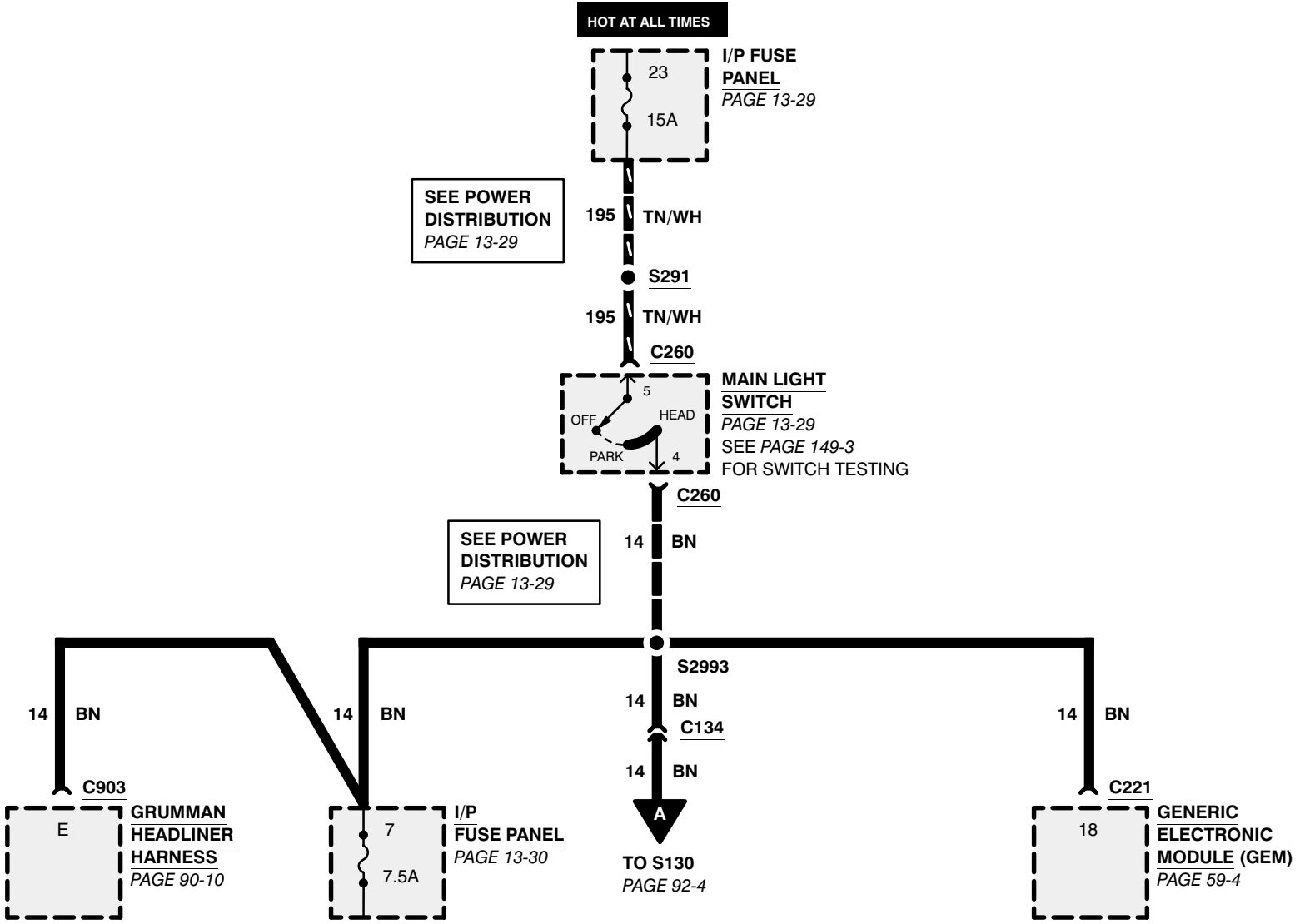
www.AUTOMOTIVEMECHANIC.org



www.AUTOMOTIVEMECHANIC.org

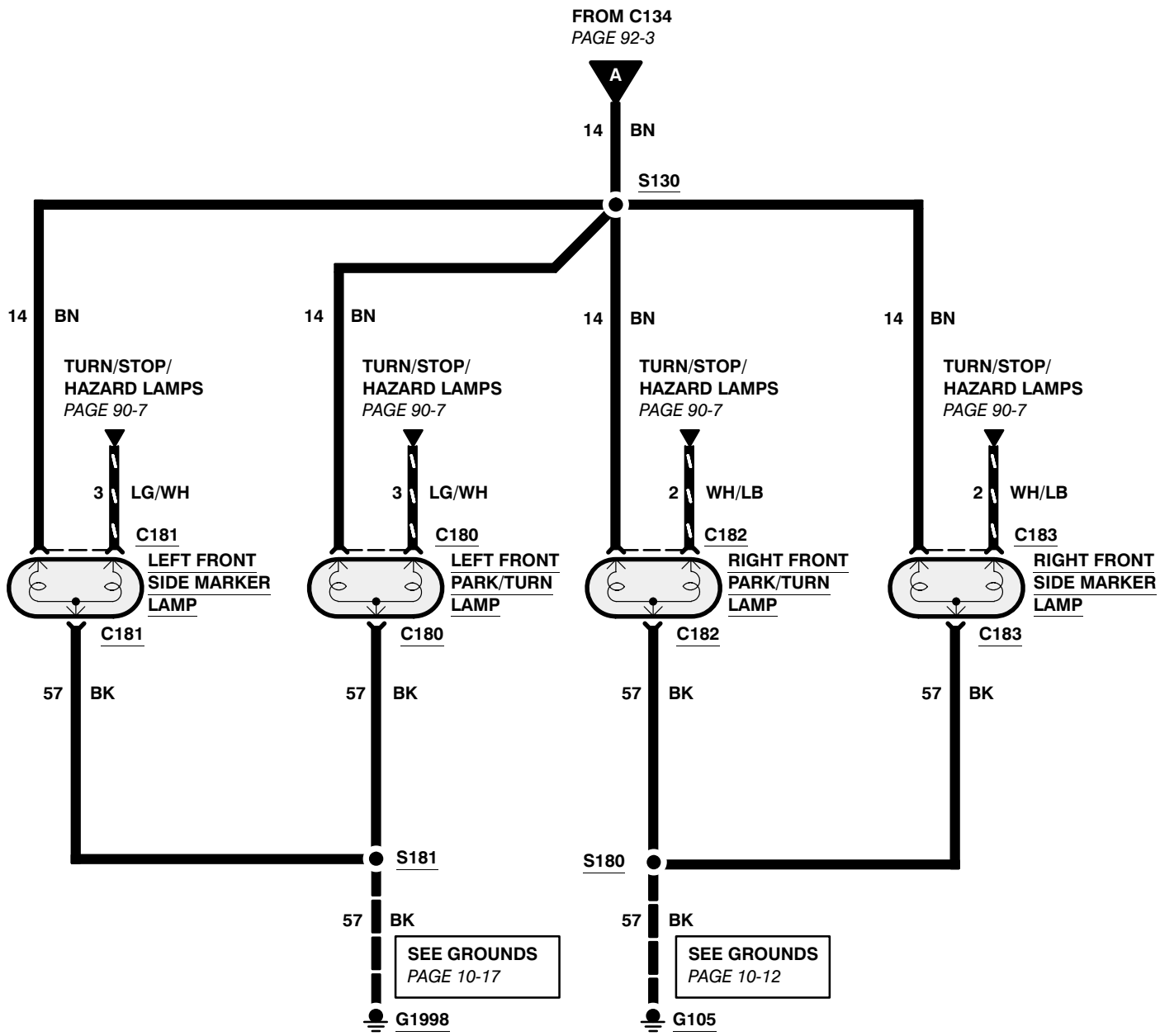
92-3 EXTERIOR LAMPS

POSTAL



www.AUTOMOTIVEMECHANIC.org

POSTAL

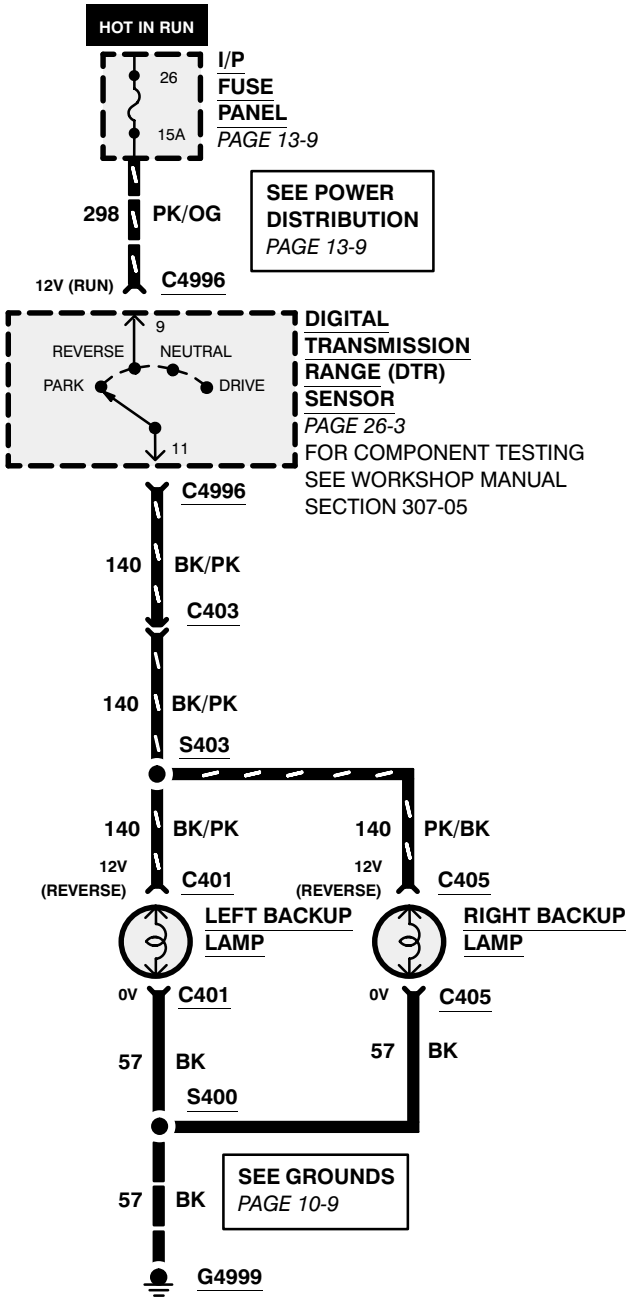


www.AUTOMOTIVE MECHANIC.ORG

93-1 BACKUP LAMPS

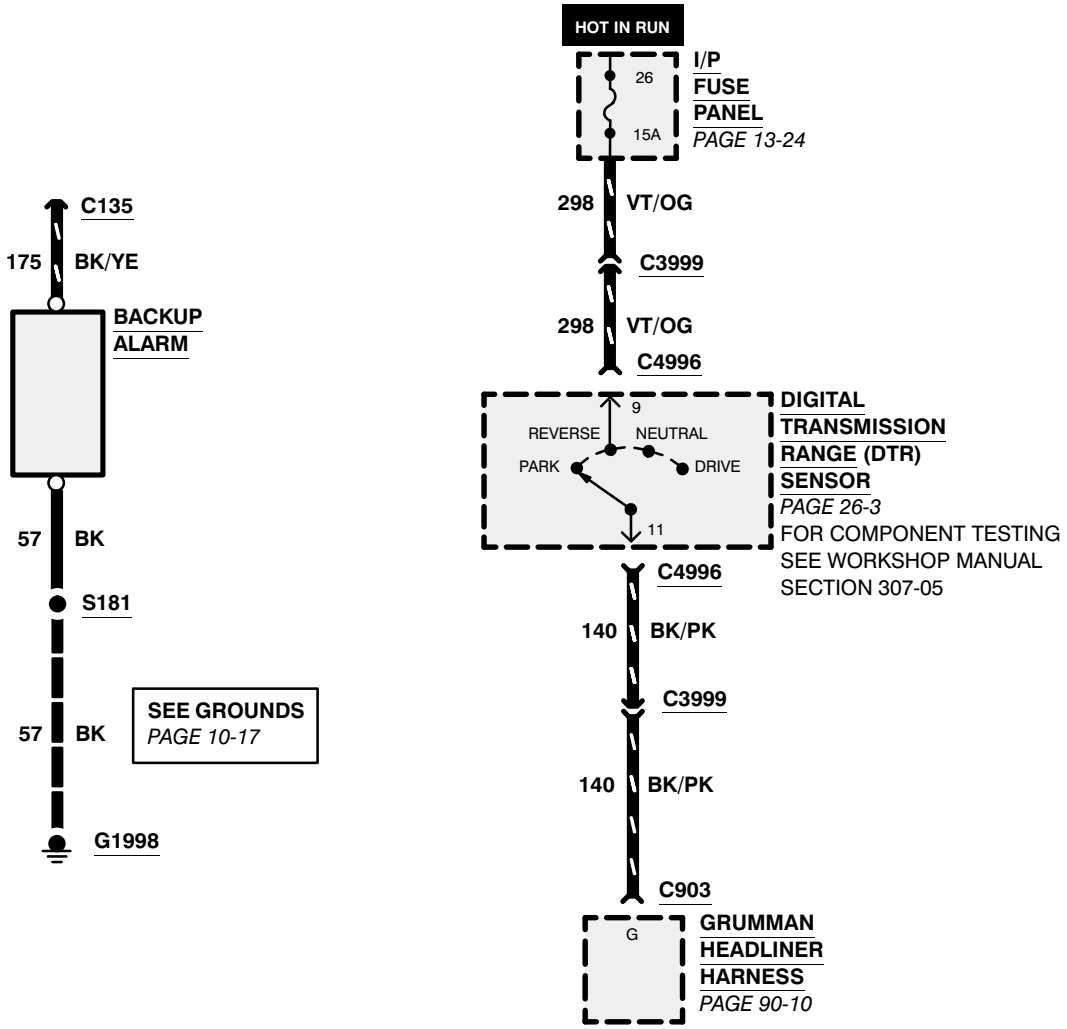
For diagnostic information, refer to Section 417-01 of the Workshop Manual.

EXCEPT POSTAL



www.AUTOMOTIVEMECHANIC.org

POSTAL

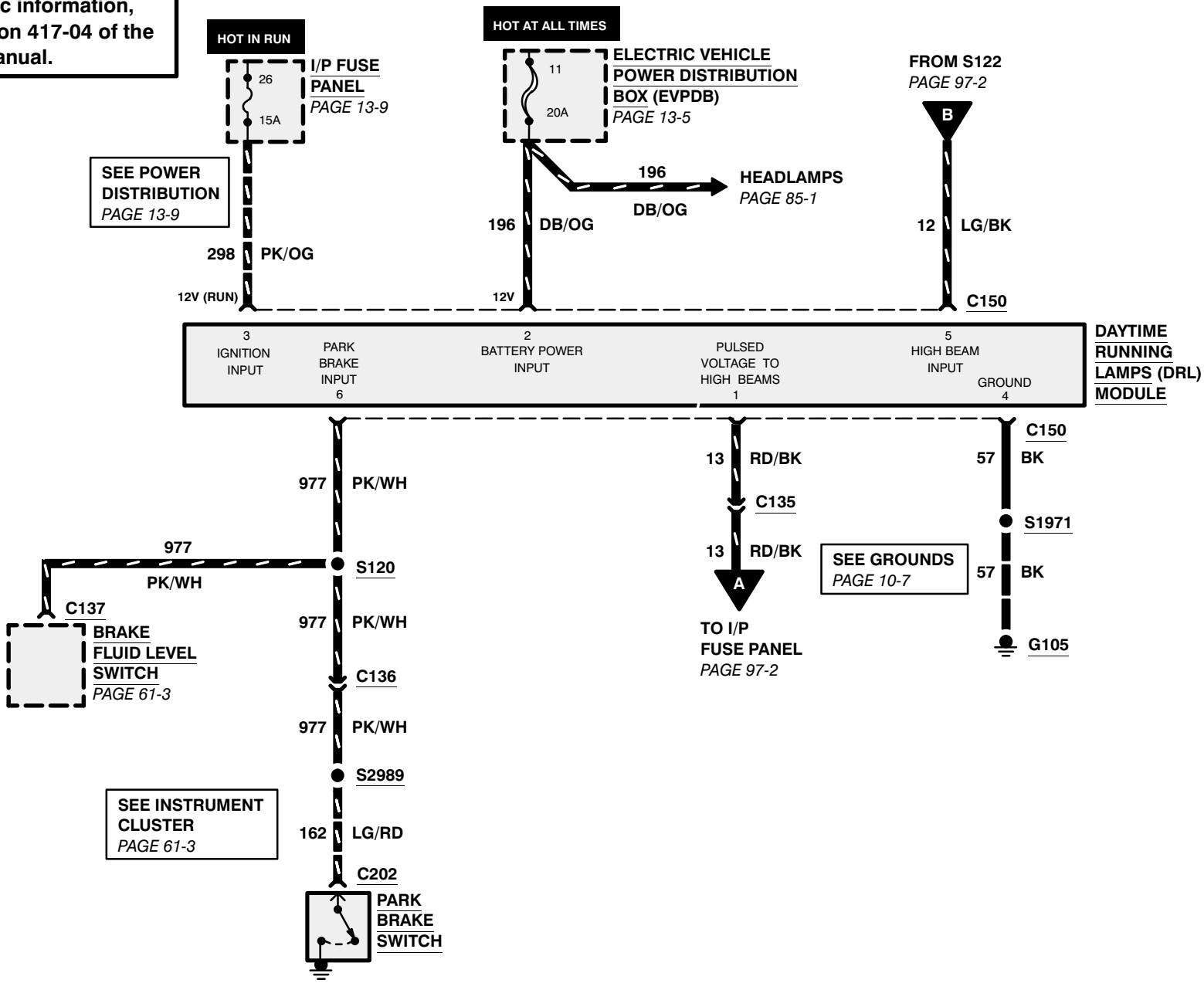


Refer to Location Index, Cell 152, for Component, Connector, Splice and Ground descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

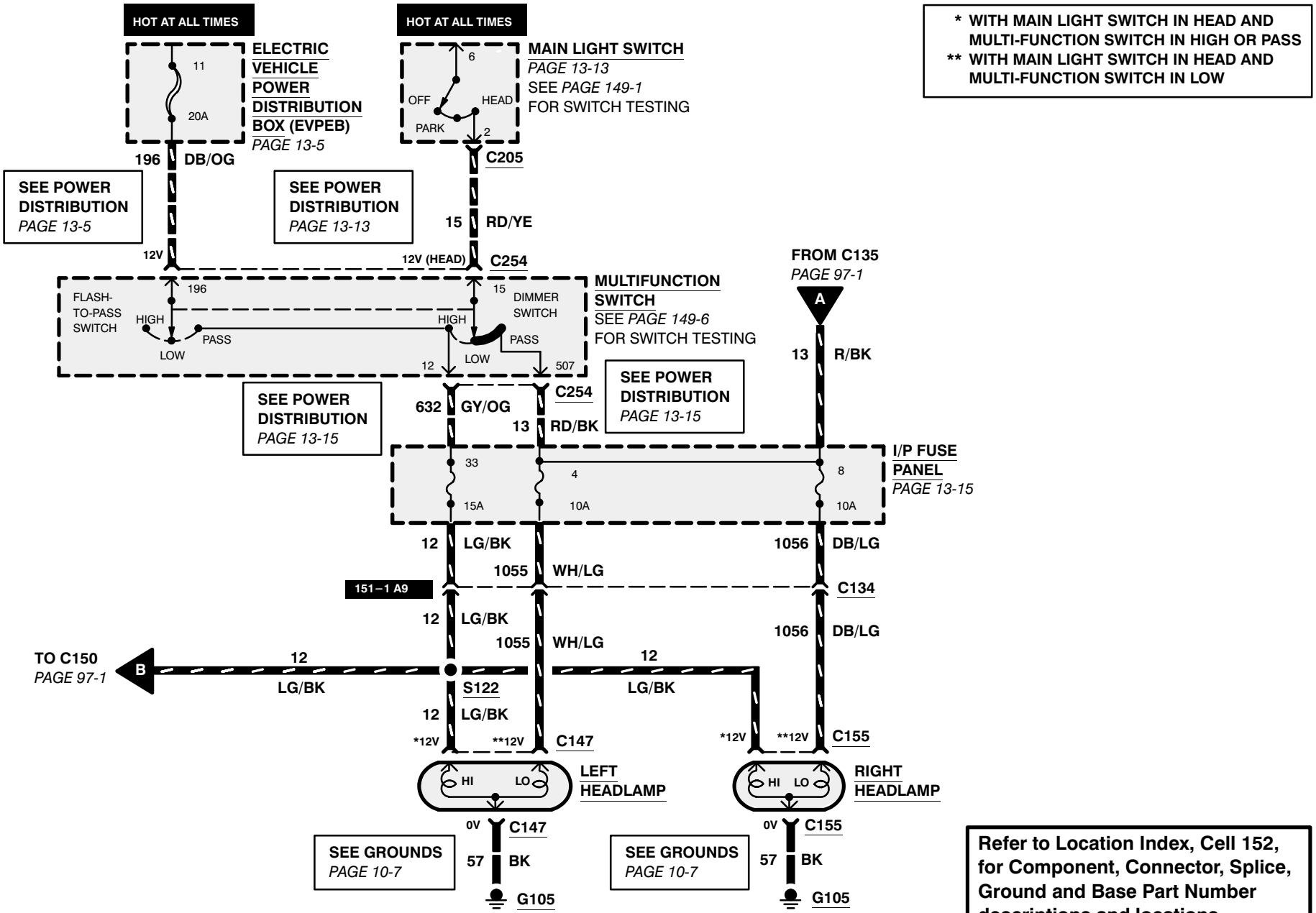
97-1 DAYTIME RUNNING LAMPS

For diagnostic information, refer to Section 417-04 of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.org

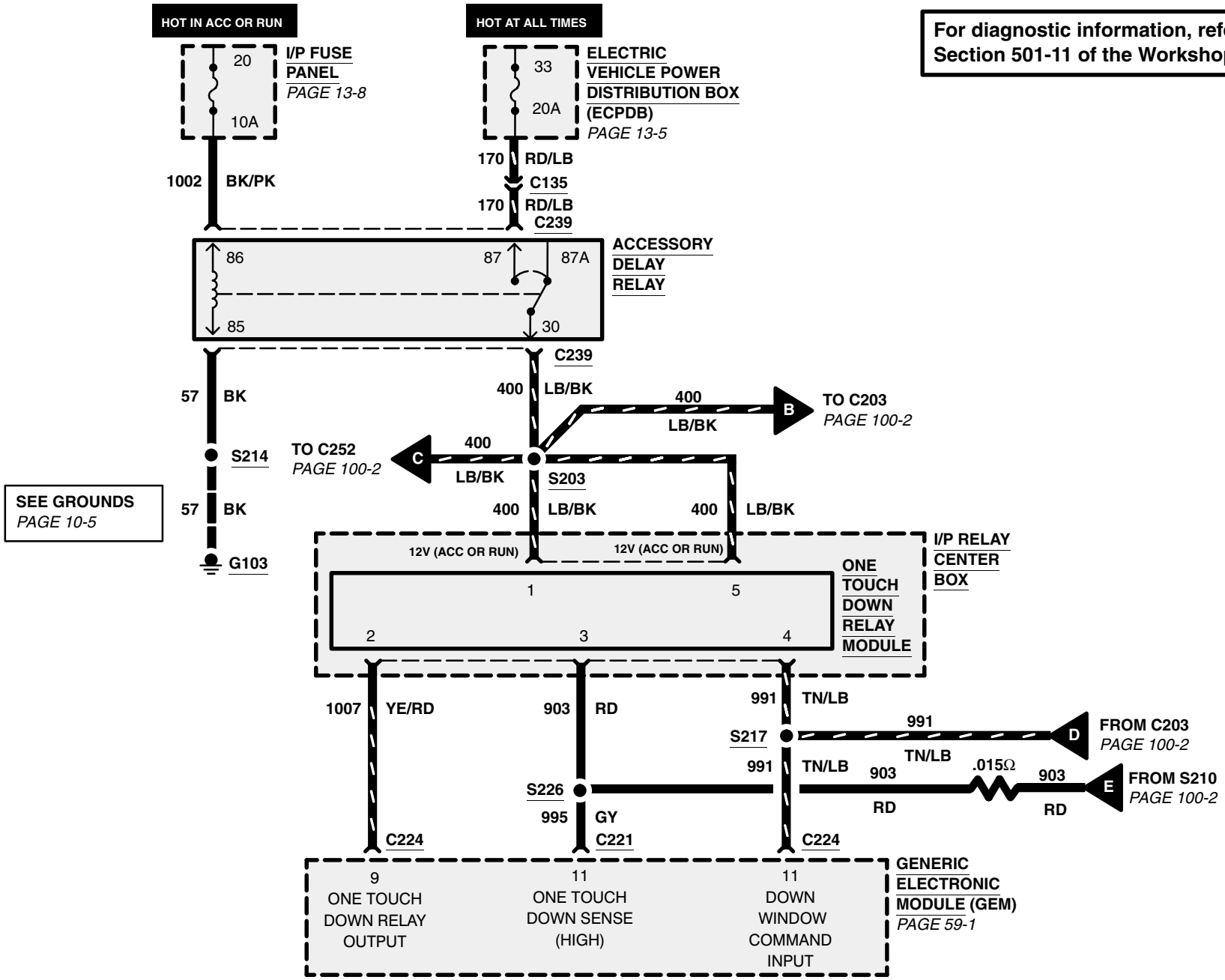
DAYTIME RUNNING LAMPS 97-2



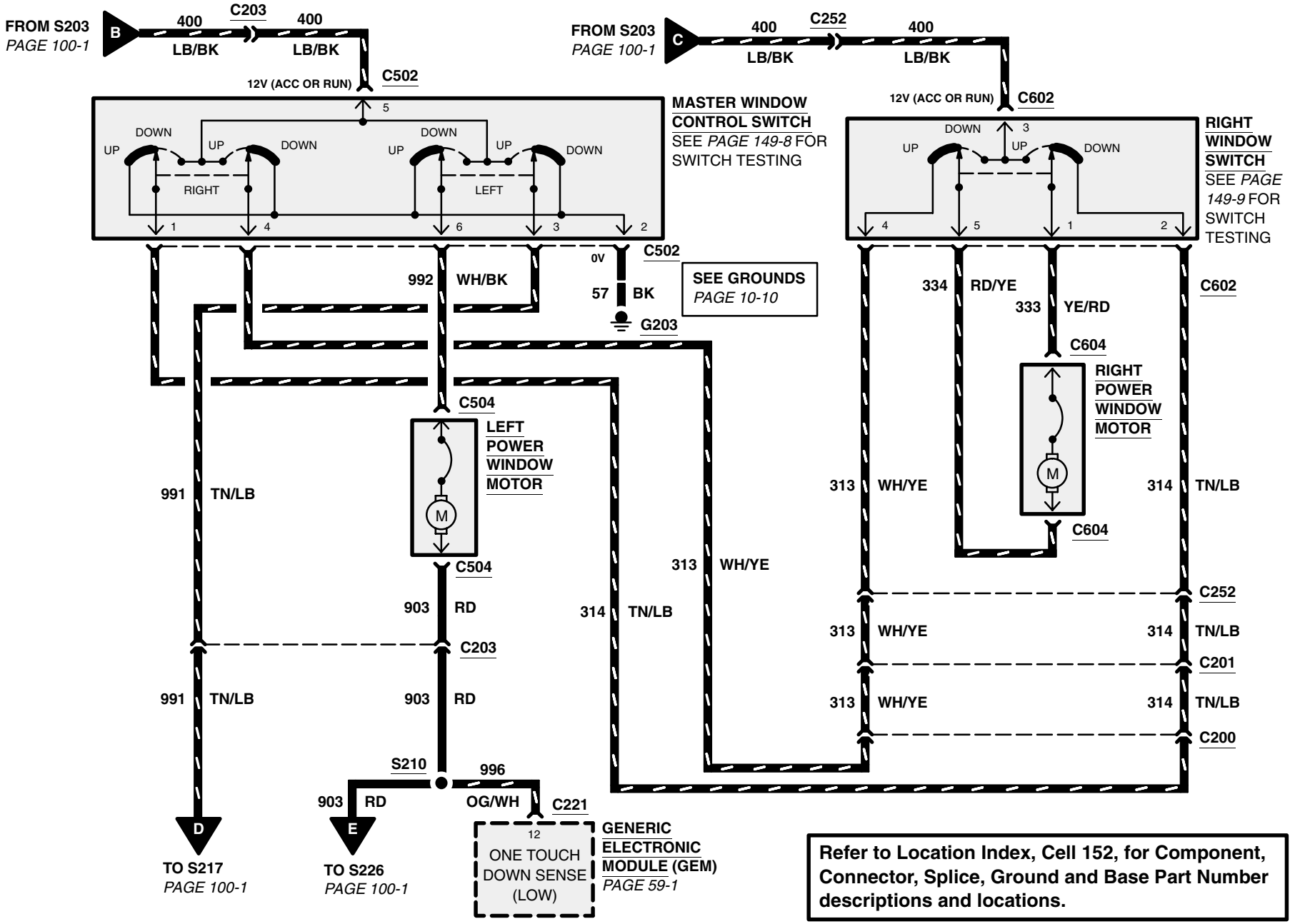
www.AUTOMOTIVE MECHANIC.ORG

100-1 POWER WINDOWS

2001 RANGER ELECTRIC VEHICLE



www.AUTOMOTIVEMECHANIC.org

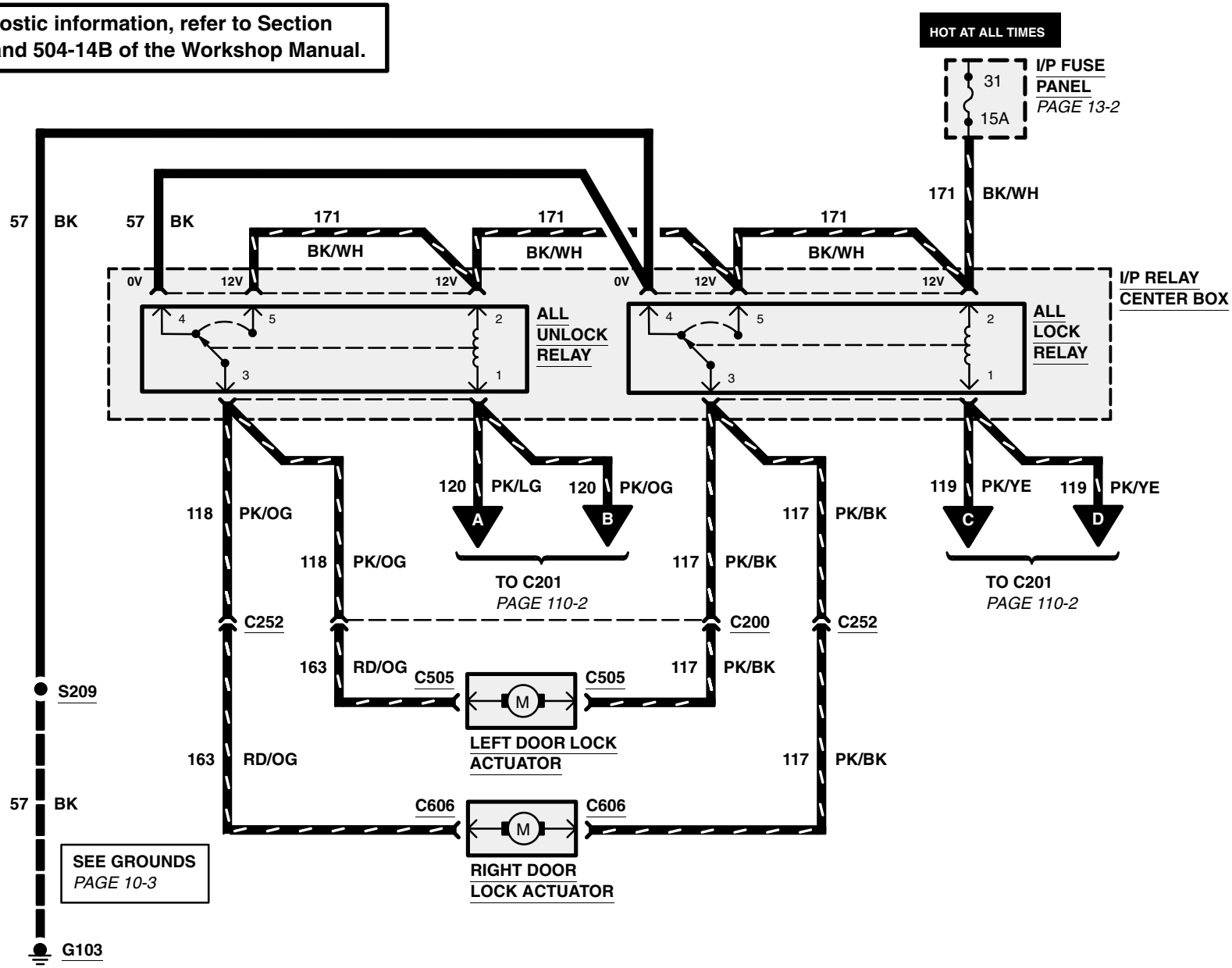


Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

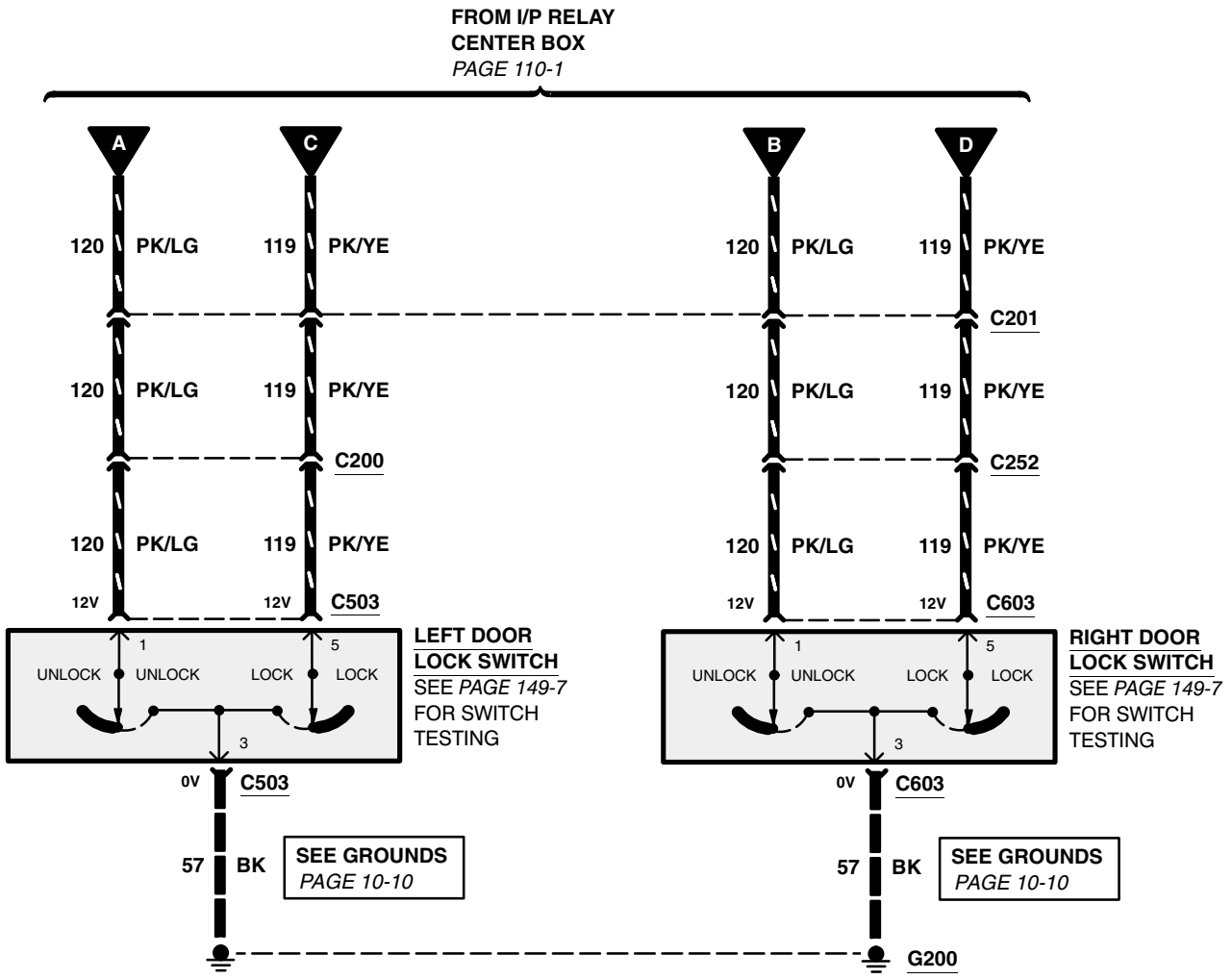
www.AUTOMOTIVE MECHANIC.ORG

110-1 POWER DOOR LOCKS

For diagnostic information, refer to Section 501-14A and 504-14B of the Workshop Manual.



www.AUTOMOTIVEMECHANIC.org

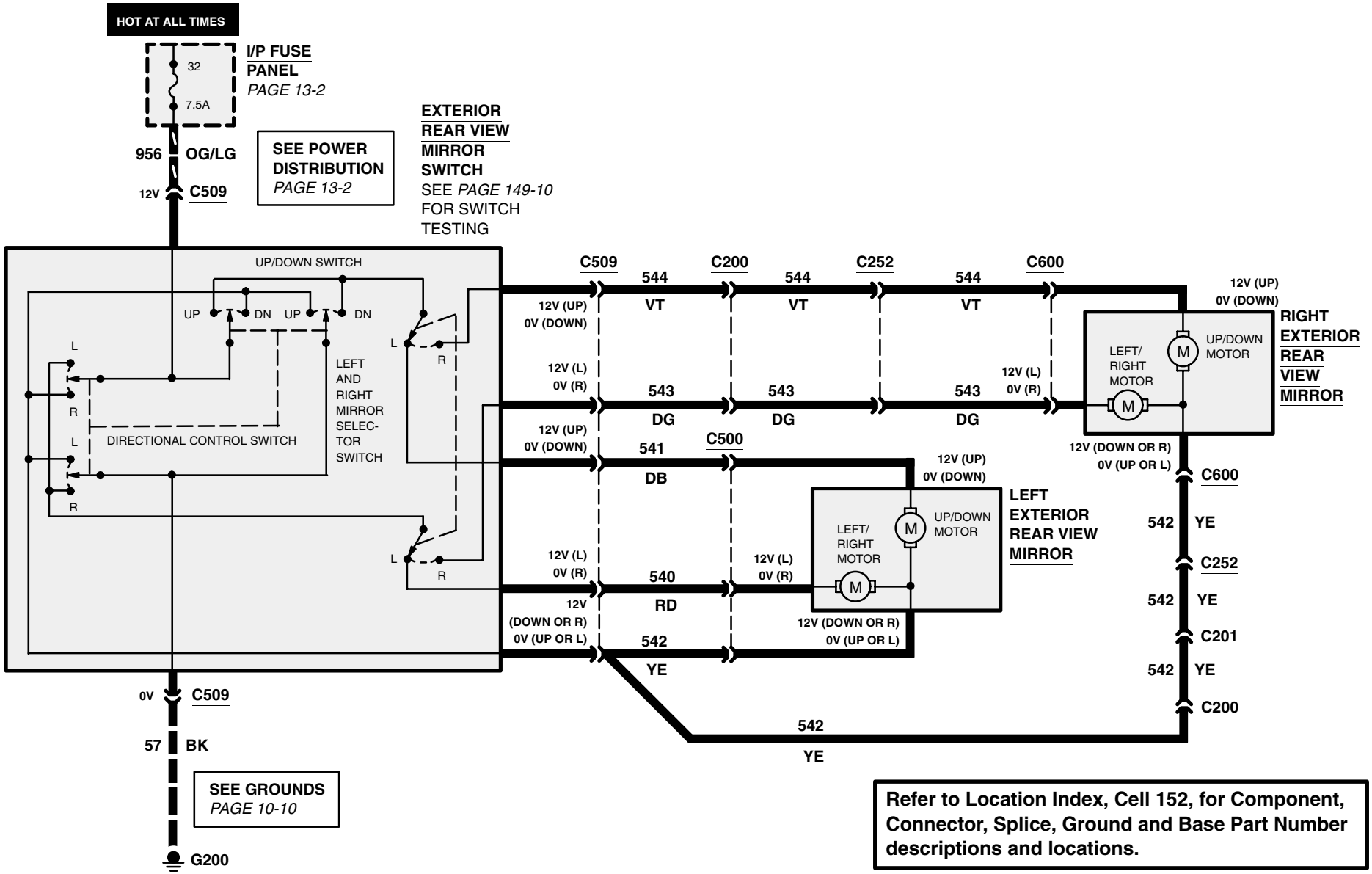


Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

124-1 POWER MIRRORS

For diagnostic information, refer to Section 501-09 of the Workshop Manual.



Refer to Location Index, Cell 152, for Component, Connector, Splice, Ground and Base Part Number descriptions and locations.

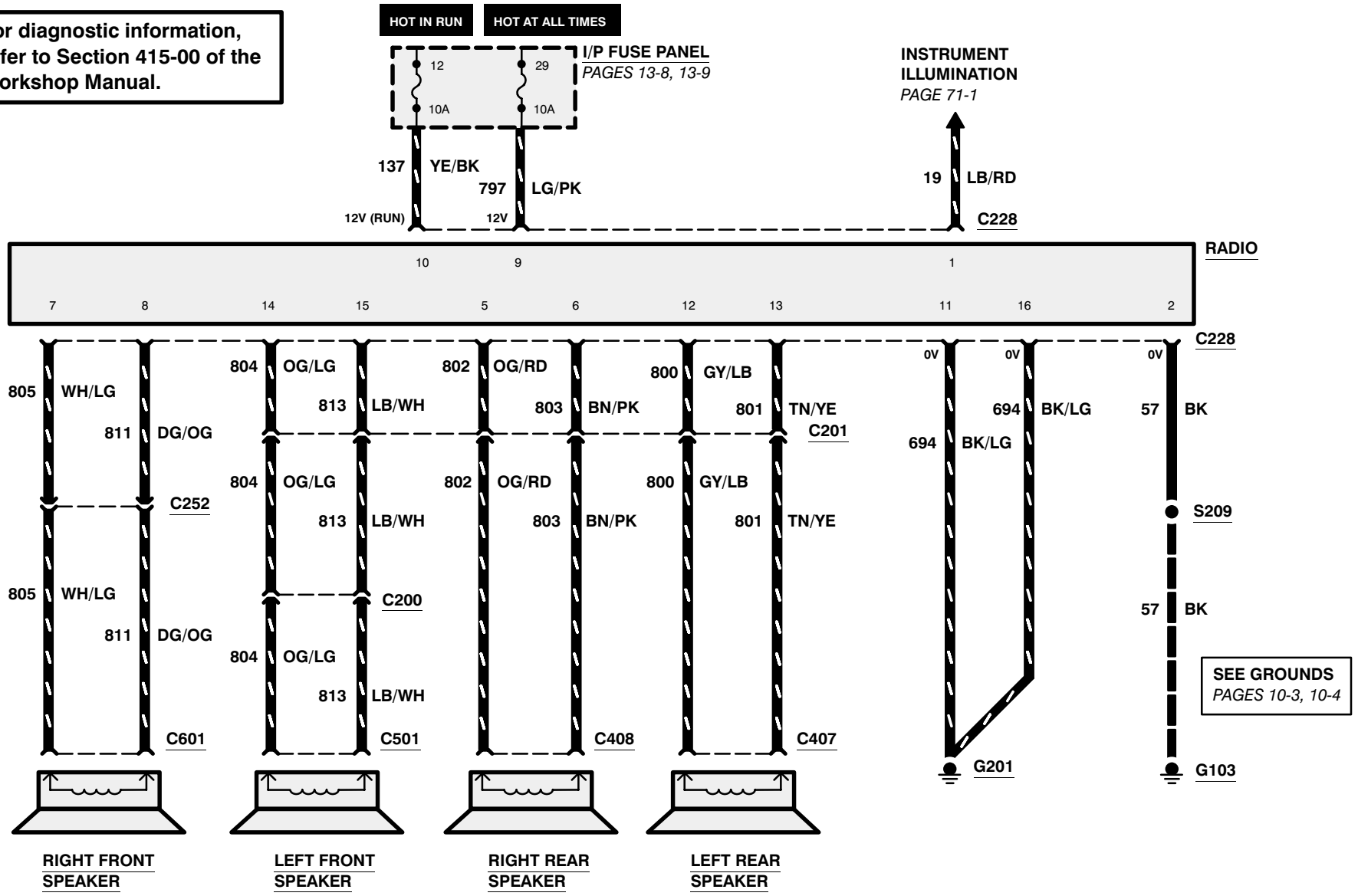
www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

130-1 RADIO

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 415-00 of the Workshop Manual.



Refer to Location Index, Cell 152, for Component, Connector, Splice and Ground descriptions and locations.

www.AUTOMOTIVEMECHANIC.org

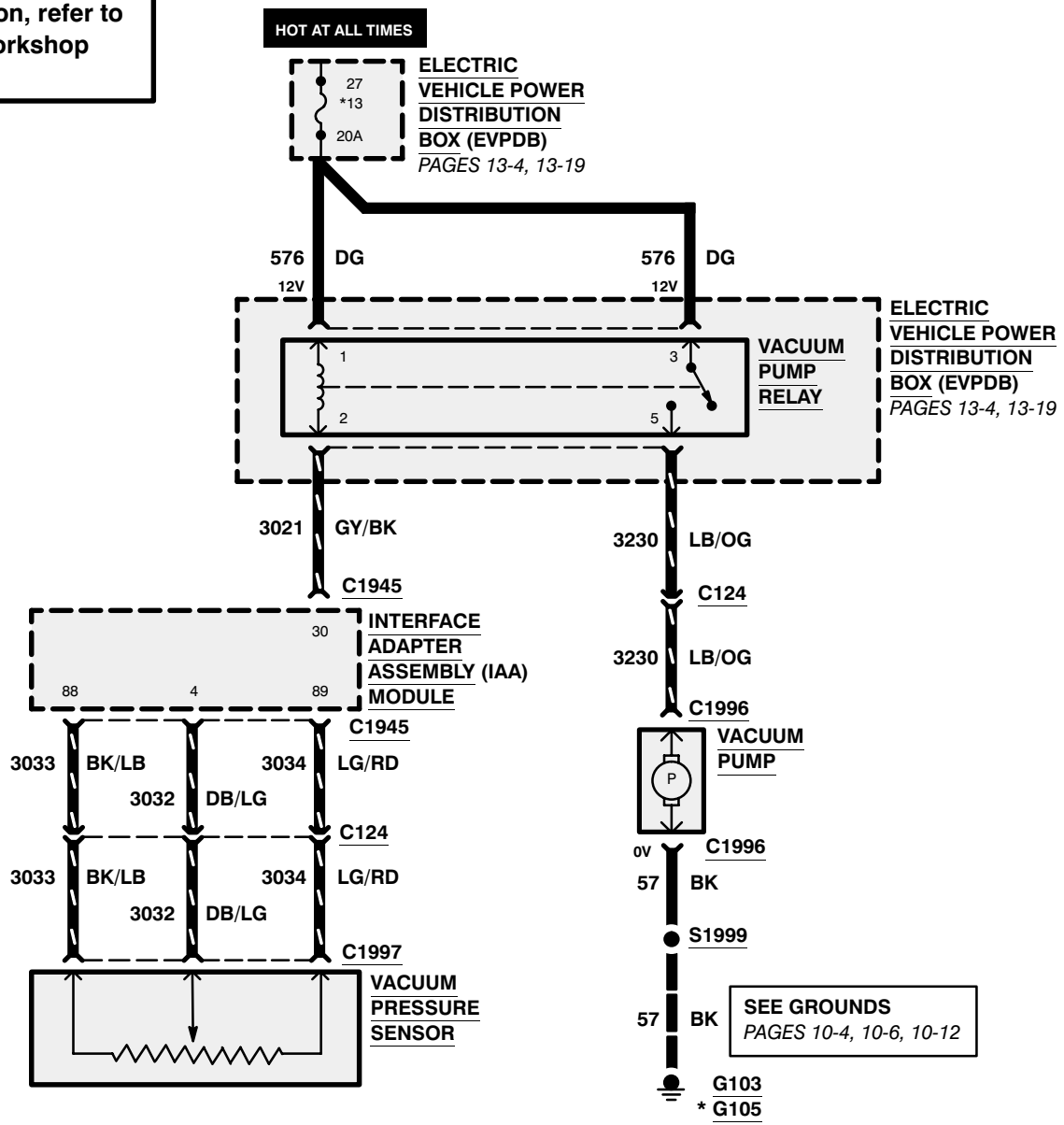
www.AUTOMOTIVEMECHANIC.ORG

139-1 VACUUM SYSTEM

2001 RANGER ELECTRIC VEHICLE

For diagnostic information, refer to Section 206-07 of the Workshop Manual.

*** POSTAL**



www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

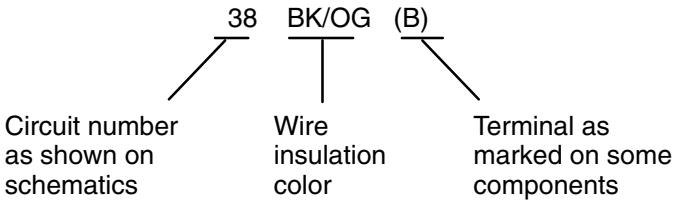
149-1 COMPONENT TESTING: INTRODUCTION

INTRODUCTION

Component testing procedures are provided to determine whether or not a component operates properly.

Testing information for each component includes a schematic with component terminal locations and step-by-step test procedures. Component terminals are identified by:

1. the circuit number of the wires that connect to that terminal,
2. the wire insulation color, and
3. letters or numbers that may be marked on the component.



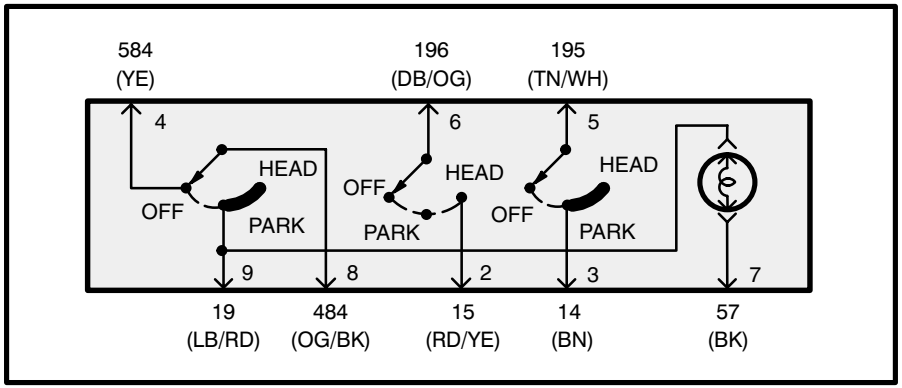
The component connector MUST BE REMOVED before testing. To test a single circuit within the component, select that circuit under the column TO TEST. If you wish to test the complete component, perform all tests.

Connect the tester to the terminals shown in the second column and operate the component as shown in the third column.

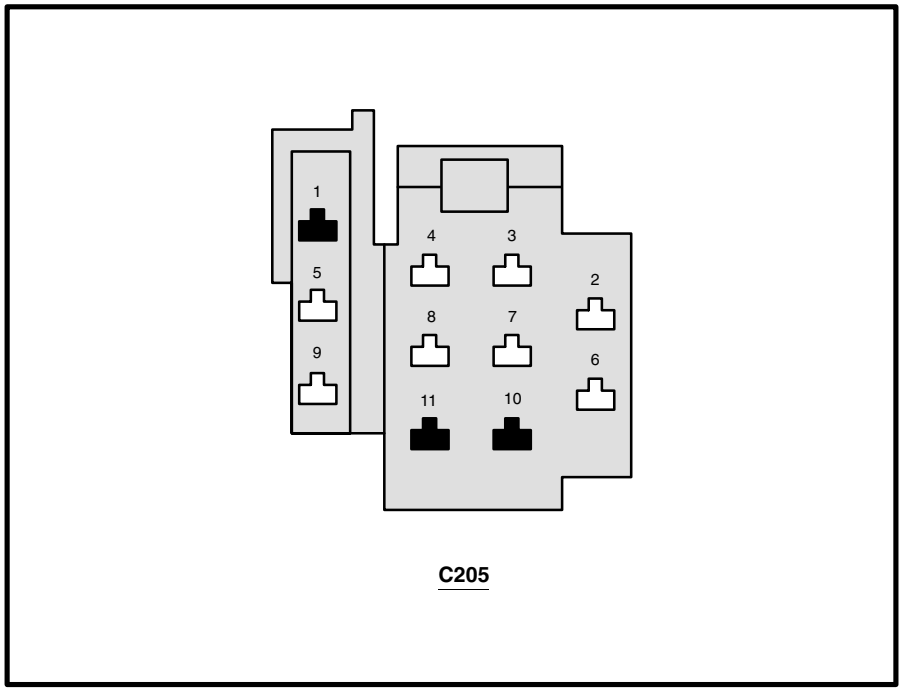
www.AUTOMOTIVEMECHANIC.ORG

COMPONENT TESTING: MAIN LIGHT SWITCH (EXCEPT POSTAL) 149-2

SCHEMATIC



TERMINALS



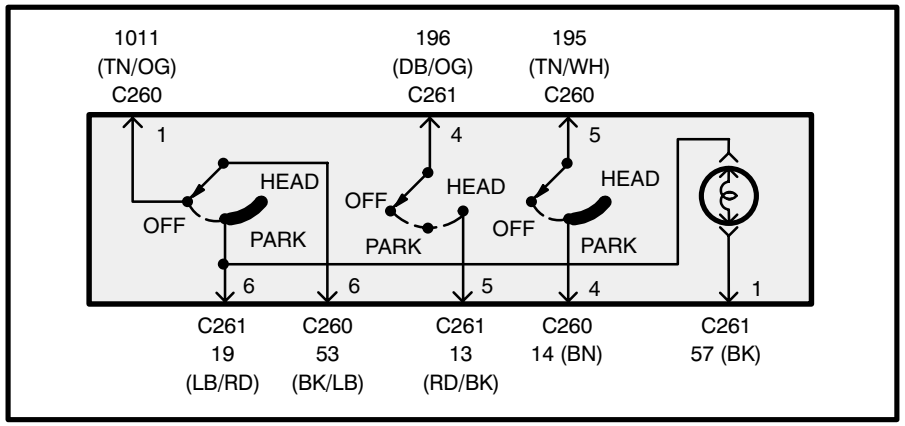
COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Headlamp Circuit	6 and 2	Off Park Head	Open Circuit Open Circuit Closed Circuit
Park Lamp Circuit	5 and 3	Off Park Head	Open Circuit Closed Circuit Closed Circuit
Illumination Circuit	4 and 8	Off Park Head	Closed Circuit Open Circuit Open Circuit
	4 and 9	Off Park Head	Open Circuit Closed Circuit Closed Circuit

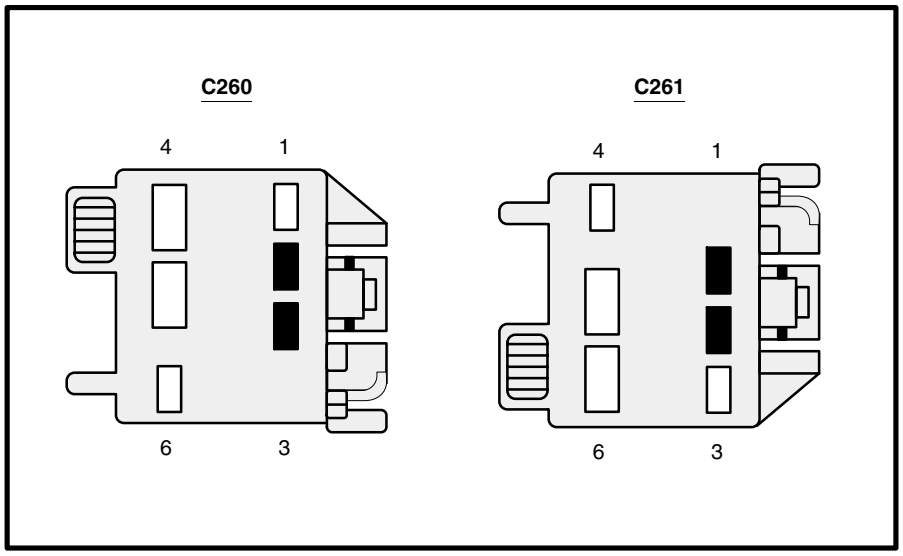
www.AUTOMOTIVEMECHANIC.org

149-3 COMPONENT TESTING: MAIN LIGHT SWITCH (POSTAL)

SCHEMATIC



TERMINALS

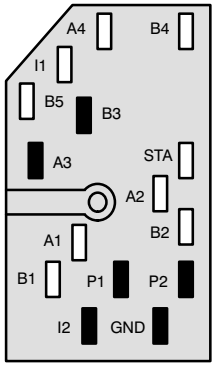


COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Headlamp Circuit	C261, 4 and C261, 5	Off Park Head	Open Circuit Open Circuit Closed Circuit
Park Lamp Circuit	C260, 5 and C260, 4	Off Park Head	Open Circuit Closed Circuit Closed Circuit
Illumination Circuit	C260, 1 and C260, 8	Off Park Head	Closed Circuit Open Circuit Open Circuit
	C260, 1 and C261, 6	Off Park Head	Open Circuit Closed Circuit Closed Circuit

www.AUTOMOTIVEMECHANIC.ORG

TERMINALS

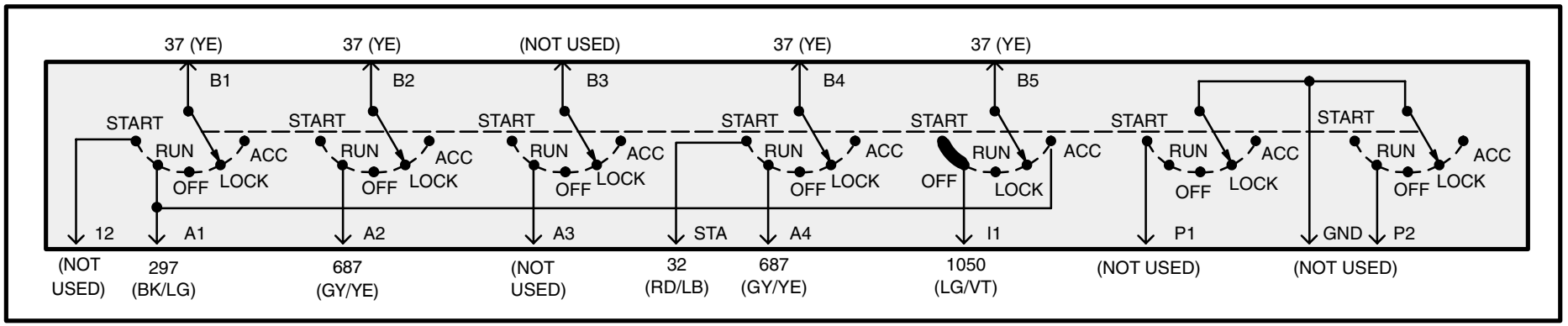


C213

COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
"Start" Circuit	B4 and STA	Acc, Lock, Off, Run, Start	Closed Circuit in START position
"Run" Circuit	B4 and A4, B2 and A2	Acc, Lock, Off, Run, Start	Closed Circuit in RUN position
Ignition Circuit	B5 and I1	Acc, Lock, Off, Run, Start	Closed Circuit in START or RUN position only
"Acc" Circuit	B5, B1 and A1	Acc, Lock, Off, Run, Start	Closed Circuit in RUN and ACC positions only
Bulb-Test Circuit	Either P1 and GND	Acc, Lock, Off, Run, Start	Closed Circuit in START position only

SCHEMATIC



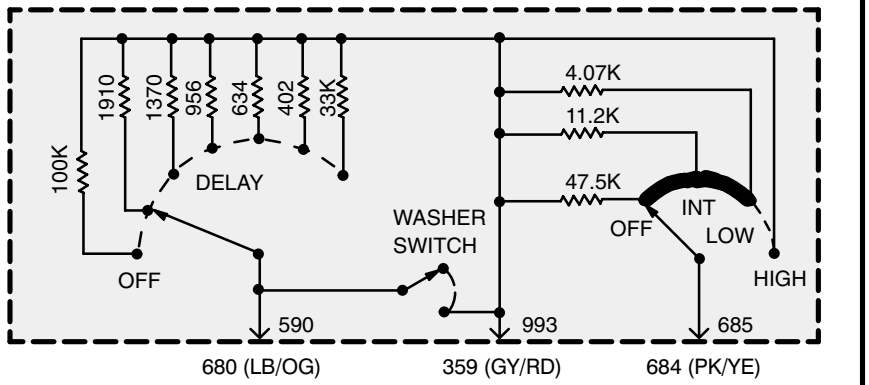
www.AUTOMOTIVEMECHANIC.org

149-5 COMPONENT TESTING: MULTIFUNCTION SWITCH

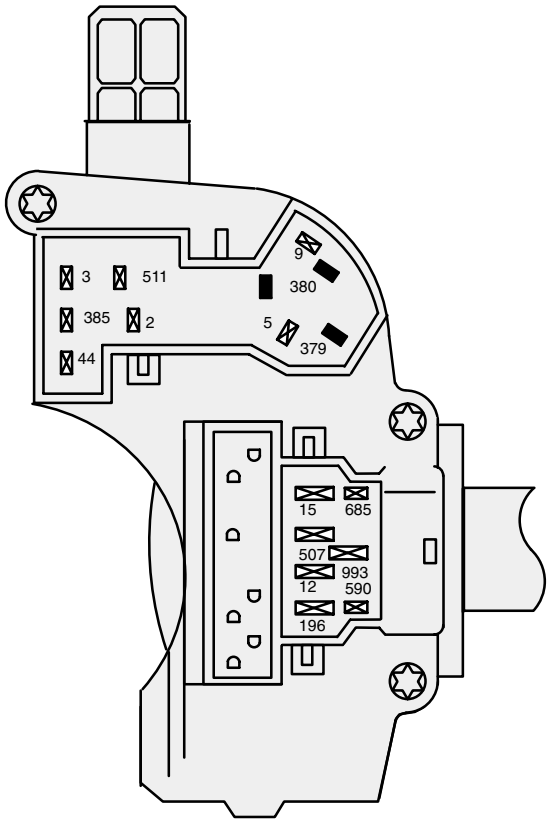
COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Washer Switch Circuit	993 and 590	With Wiper Switch OFF: Push Washer Switch in Release Washer Switch	Closed Circuit (+/– 10%) 100K ohm
Wiper Switch Circuit	685 and 993	OFF INT LOW HIGH	47.5K ohm 11.2K ohm 4.08K ohm Closed Circuit (+/– 5%)
Interval Time Adjust	993 and 590	OFF Through INTERVAL Steps	Rotate control from OFF; Ohmmeter will show decreasing resistance from 100K ohm max. to 3.3K ohm min. (+/– 10%)

SCHEMATIC



TERMINALS



(COMPONENT VIEW)

www.AUTOMOTIVEMECHANIC.ORG

COMPONENT TESTING: MULTIFUNCTION SWITCH

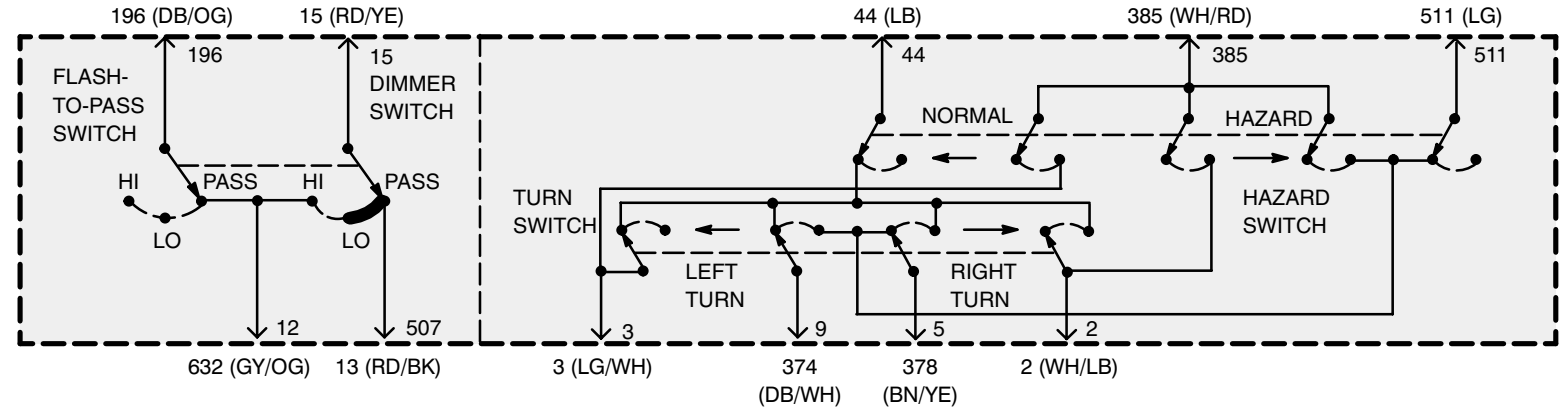
COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Turn Switch Circuit	44 and 3	Turn Left	Closed Circuit
	44 and 2	Turn Right	Closed Circuit

COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Hazard Switch Circuit	385 and 3	Hazard	Closed Circuit
	385 and 2	Hazard	Closed Circuit
Passing Beam and Dimmer Switch Circuit	196 and 12	Pull half way up	Closed Circuit
	15 and 12	Pull up and Release	Closed Circuit only when switch is in HIGH position
	15 and 507	Pull up and Release	Closed Circuit only when switch is in LOW position

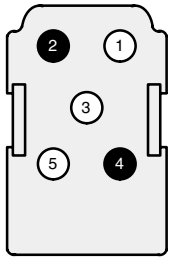
SCHEMATIC



www.AUTOMOTIVEMECHANIC.ORG

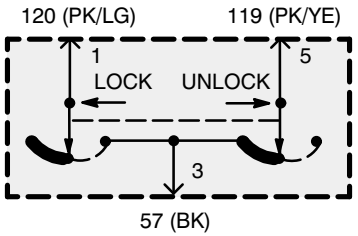
149-7 COMPONENT TESTING: LEFT/RIGHT DOOR LOCK SWITCH

TERMINALS



C503/C603

SCHEMATIC



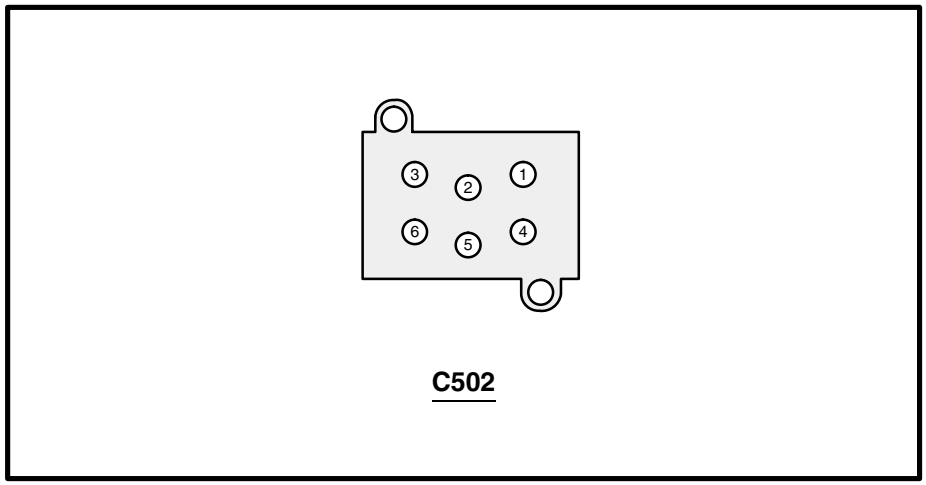
COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Lock Both Doors	5 and 3	Lock	Closed Circuit
Unlock Both Doors	1 and 3	Unlock	Closed Circuit

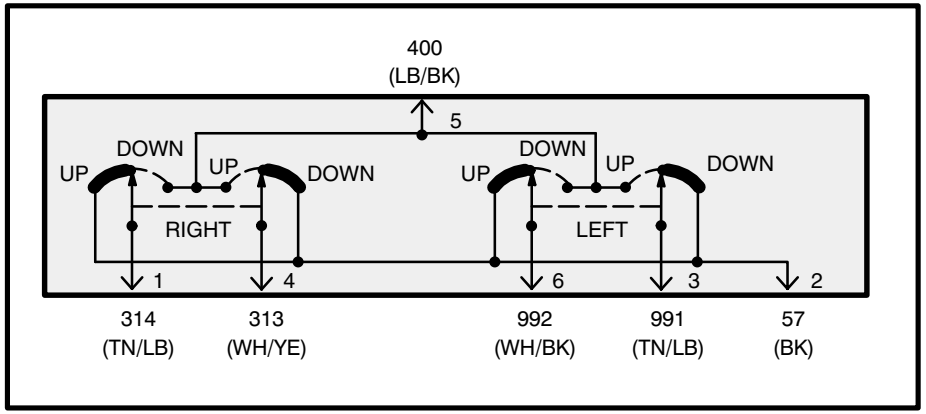
www.AUTOMOTIVEMECHANIC.org

COMPONENT TESTING: MASTER WINDOW CONTROL SWITCH 149-8

TERMINALS



SCHEMATIC



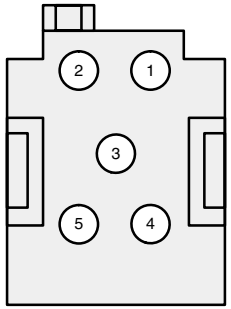
COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Driver Window	5 and 3 5 and 6	Up Down	Closed Circuit Closed Circuit
Passenger Window	5 and 4 5 and 1	Up Down	Closed Circuit Closed Circuit

www.AUTOMOTIVE MECHANIC.ORG

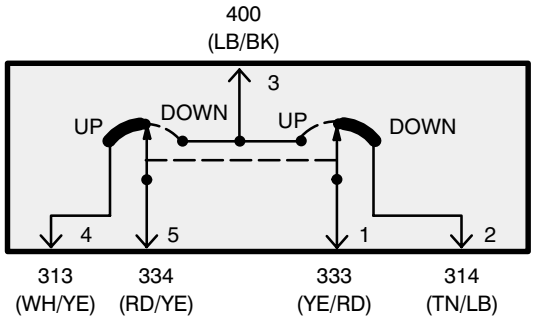
149-9 COMPONENT TESTING: RIGHT WINDOW SWITCH

TERMINALS



C602

SCHEMATIC

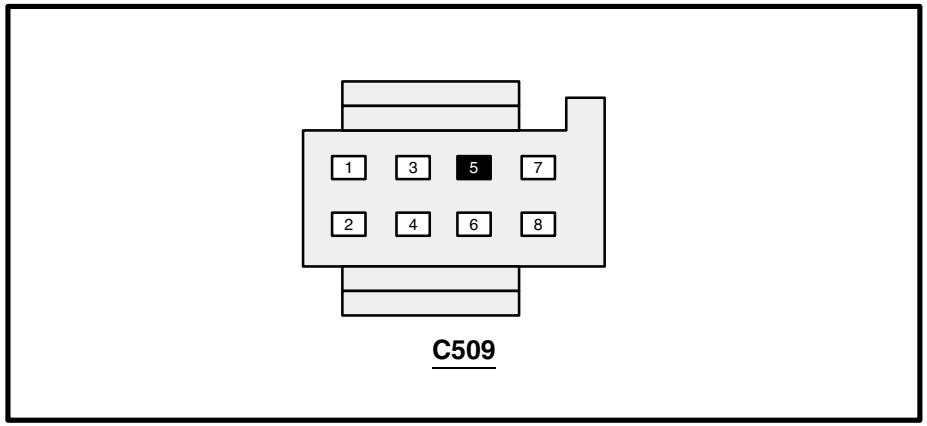


COMPONENT TESTING PROCEDURE

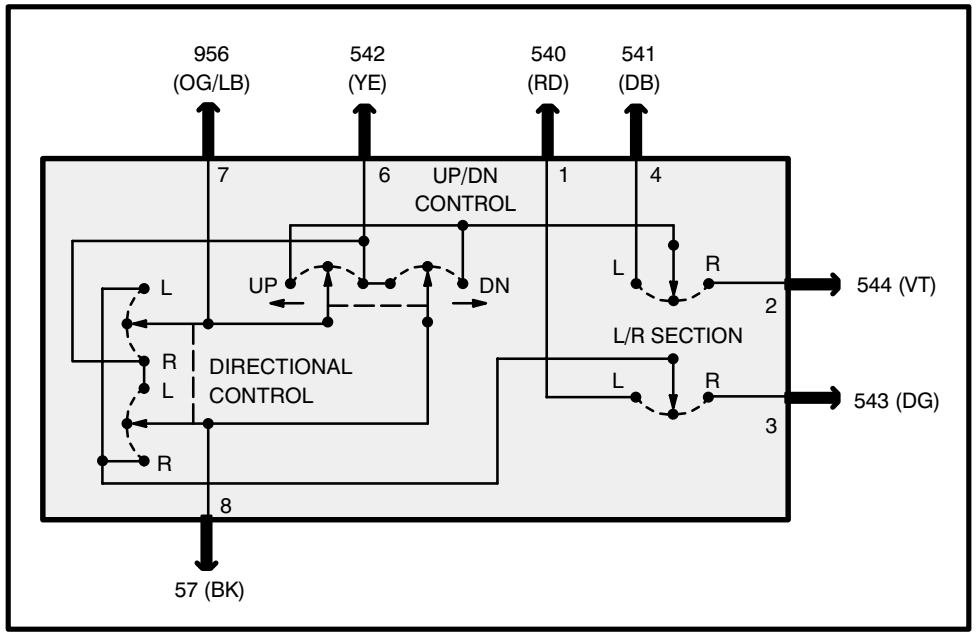
TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Up Switch Circuit	3 and 1 4 and 5	Up Up and at Rest	Closed Circuit Closed Circuit
Down Switch Circuit	3 and 5 1 and 2	Down Down and at Rest	Closed Circuit Closed Circuit

www.AUTOMOTIVE MECHANIC.ORG

TERMINALS



SCHEMATIC



COMPONENT TESTING PROCEDURE

TO TEST	Connect Self-Powered Test Light or Ohmmeter to Terminals	Move Switch to These Positions	A Good Switch Will Indicate
Left Mirror		Selector Switch Left	
Up	7 and 4 6 and 8	Up	Closed Circuit Closed Circuit
Down	7 and 6 4 and 8	Down	Closed Circuit Closed Circuit
Left	7 and 1 6 and 8	Left	Closed Circuit Closed Circuit
Right	7 and 6 1 and 8	Right	Closed Circuit Closed Circuit
Right Mirror		Selector Switch Right	
Up	7 and 2 6 and 8	Up	Closed Circuit Closed Circuit
Down	7 and 6 2 and 8	Down	Closed Circuit Closed Circuit
Left	7 and 3 6 and 8	Left	Closed Circuit Closed Circuit
Right	7 and 6 3 and 8	Right	Closed Circuit Closed Circuit

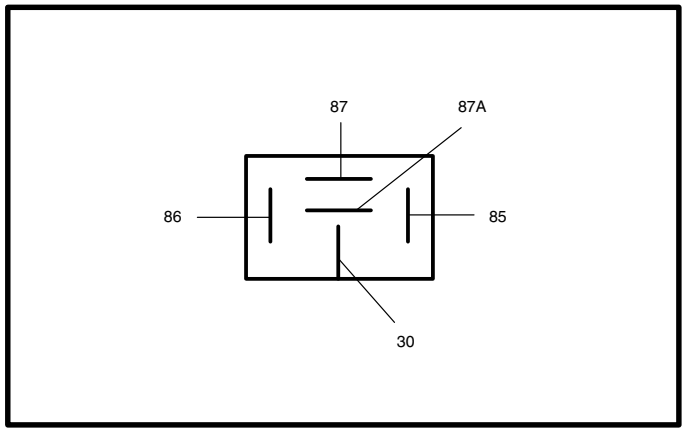
www.AUTOMOTIVEMECHANIC.ORG

149-11 COMPONENT TESTING: MINI ISO RELAY

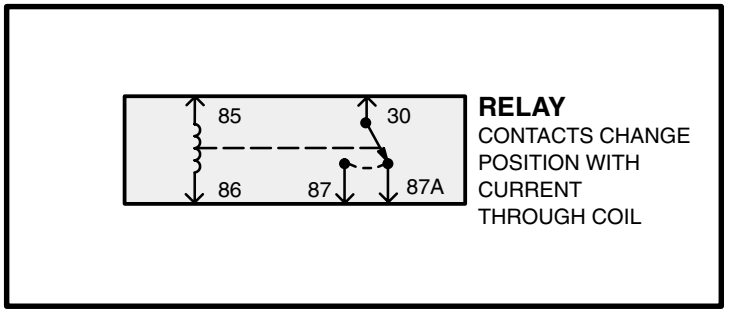
COMPONENT TESTING PROCEDURE

Connect battery pos. and neg. to terminals:	Check continuity from terminals:	Continuity will be:
85 and 86	30 to 87 and 30 to 87A	From 30 to 87 only
–	85 to all others	To 86 only
–	30 to all others	To 87A only

TERMINALS



SCHEMATIC

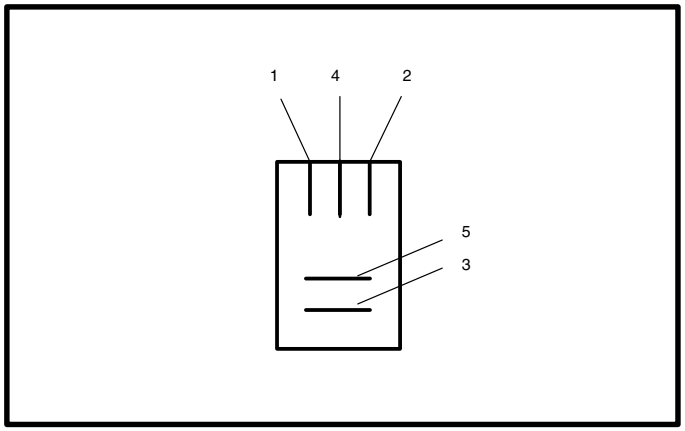


www.AUTOMOTIVEMECHANIC.ORG

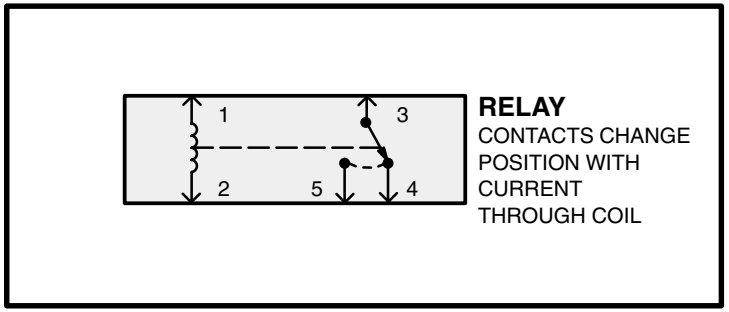
COMPONENT TESTING PROCEDURE

Connect battery pos. and neg. to terminals:	Check continuity from terminals:	Continuity will be:
1 and 2	3 to 4 and 3 to 5	From 3 to 5 only
–	1 to all others	To 2 only
–	3 to all others	To 4 only

TERMINALS



SCHEMATIC

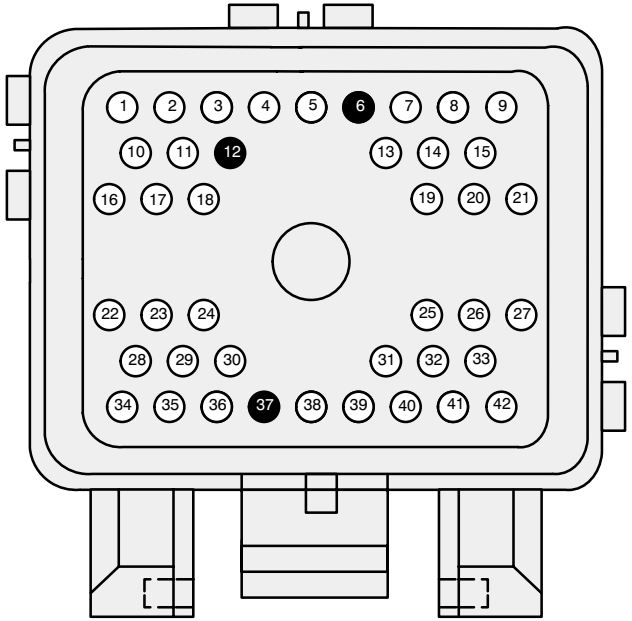


www.AUTOMOTIVEMECHANIC.ORG

150-1 CONNECTOR FACES

12B637

* POSTAL



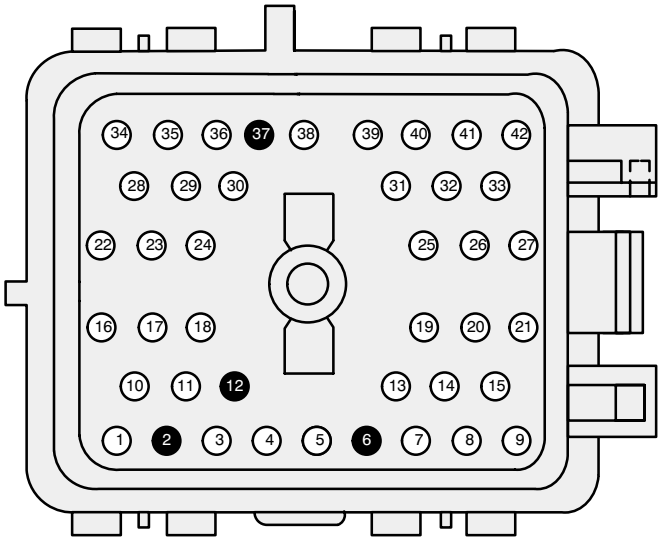
C124F

PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	3029 (DG/OG)	15	3261 (PK/YE)	29	3230 (LB/OG)
	* –	16	3990 (LB/RD)	30	3229 (WH/RD)
2	4048 (RD/YE)	17	3008 (VT)	31	3030 (DG/OG)
	*K (OG)	18	3992 (BN/YE)		* –
3	3985 (PK)	19	3038 (OG)	32	3002 (OG/LB)
4	3827 (GY/WH)	20	3834 (LG)	33	3009 (OG/RD)
5	566 (DG)	21	3006 (PK/LG)	34	3033 (BK/LB)
6	–	22	3221 (BN/LB)	35	3220 (PK)
7	3037 (GY/WH)		* –		* –
8	3035 (LG/OG)	23	3032 (DB/LG)	36	3023 (BK/OG)
9	3031 (BK/PK)	24	3034 (LG/RD)	37	–
	* –	25	4009 (LB/RD)	38	3226 (BK/LG)
10	3022 (RD/YE)		*3984 (RD)	39	3227 (RD)
11	679 (GY/BK)	26	3401 (DB/LG)	40	3228 (BN)
12	–	27	3826 (WH)	41	3800 (LG/BK)
13	3036 (YE/WH)	28	57 (BK)	42	3993 (YE/RD)
14	3260 (OG/WH)				

www.AUTOMOTIVEMECHANIC.ORG

* POSTAL

14290



C124M

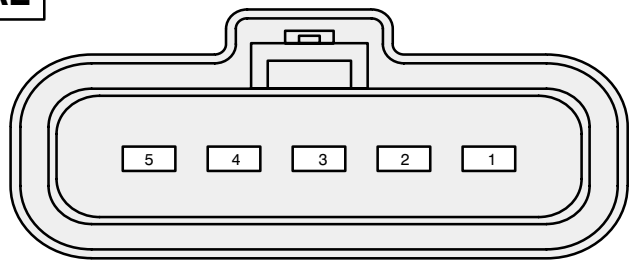
PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	3029 (DG/OG)	15	3261 (PK/YE)	29	3230 (LB/OG)
	* –	16	3990 (LB/RD)	30	3229 (WH/OG)
2	–	17	3008 (VT)	31	3030 (DG/OG)
	*K (OG)	18	3992 (BN/YE)		* –
3	3985 (PK)	19	3038 (OG)	32	3002 (OG/LB)
4	3827 (GY/WH)	20	3834 (LG)	33	3009 (OG/RD)
5	566 (DG)	21	3006 (PK/LG)	34	3033 (BK/LB)
6	–	22	3221 (BN/LB)	35	3220 (PK)
7	3037 (GY/WH)		* –		* –
8	3035 (LG/OG)	23	3032 (DB/LG)	36	3023 (BK/OG)
9	3031 (BK/PK)	24	3034 (LG/RD)	37	–
	* –	25	4009 (LB/RD)	38	3226 (BK/LG)
10	3022 (RD/YE)		*3984 (RD)	39	3227 (RD)
11	679 (GY/BK)	26	3401 (DB/LG)	40	3228 (BN)
12	–	27	3826 (WH)	41	3800 (LG/BK)
13	3036 (YE/WH)	28	57 (BK)	42	3993 (YE/RD)
14	3260 (OG/WH)				

www.AUTOMOTIVE MECHANIC.ORG

150-3 CONNECTOR FACES

EXCEPT POSTAL

14290

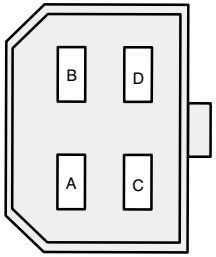


C131
WINDSHIELD WIPER MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	56 (DB/OG)	Wiper High/Low Relay, Switched Power, Output, High
2	58 (WH)	Wiper High/Low Relay, Switched Power, Output, Low
3	57 (BK)	Ground
4	63 (RD)	Voltage in Run or Accessory (Overload Protected)
5	671 (LB)	Wiper Run/Park Relay, Switched Output

POSTAL

14290



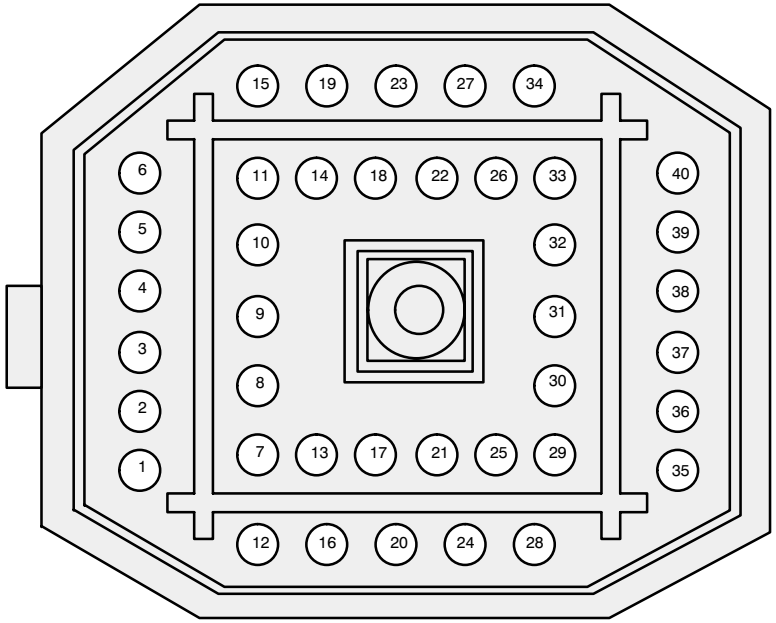
C131
WINDSHIELD WIPER MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
A	57 (BK)	Ground
B	58 (WH)	Wiper High/Low Relay, Switched Power, Output, Low
C	61 (YE/RD)	Voltage in Run or Accessory (Overload Protected)
D	56 (DB/OG)	Wiper High/Low Relay, Switched Power, Output, High

www.AUTOMOTIVEMECHANIC.org

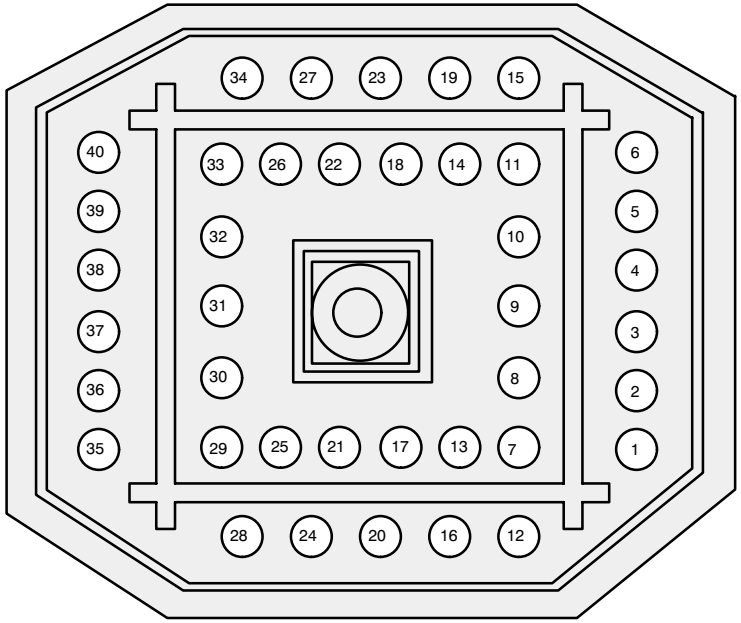
* POSTAL

14401



C134F

14290



C134M

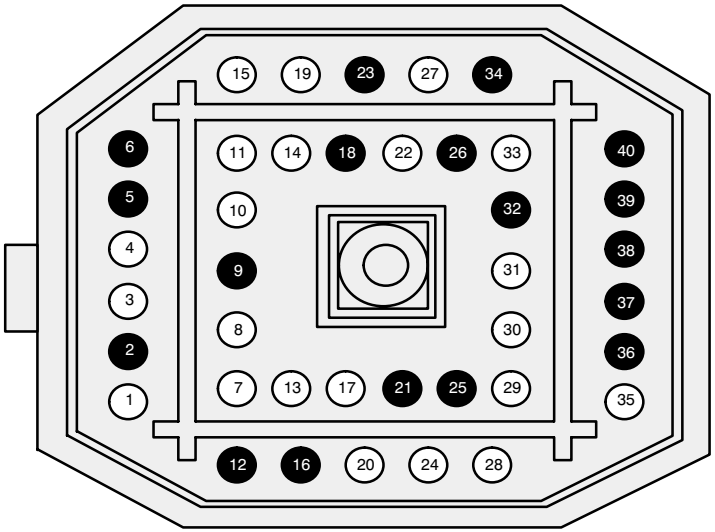
PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	14 (BN)	11	491 (OG/LB)	21	3406 (DG/LG)	31	3997 (DG)
2	88 (BK/WH)	12	3049 (BK/LG)	22	3037 (GY/WH)	32	6 (YE/LG)
3	1056 (DB/LG)	13	511 (LG)	23	3060 (GY/RD)	33	3047 (YE/WH)
(F)	*160 (DB/WH)	14	3228 (BN)	24	3405 (GY/RD)	34	3048 (OG)
4	1055 (WH/LG)	15	974 (OG)	25	3407 (RD/WH)	35	752 (YE/RD)
(F)	*161 (DG/OG)	16	70 (LB/WH)	26	3053 (BN/WH)	36	751 (DB/WH)
5	12 (LG/BK)	17	3408 (DB/OG)	27	3054 (BK/LG)	37	3058 (LG/RD)
6	196 (DB/OG)	18	3056 (TN/LG)	28	754 (LG/WH)	38	3059 (YE/LG)
7	3068 (BN/PK)	19	3067 (LB/RD)	29	603 (DG)	39	3055 (BN/LG)
8	3066 (OG/YE)	20	10 (LG/RD)	30	3057 (LG/OG)	*	–
9	3986 (DG)					40	3041 (BK)
10	3991 (TN)						

www.AUTOMOTIVEMECHANIC.org

150-5 CONNECTOR FACES

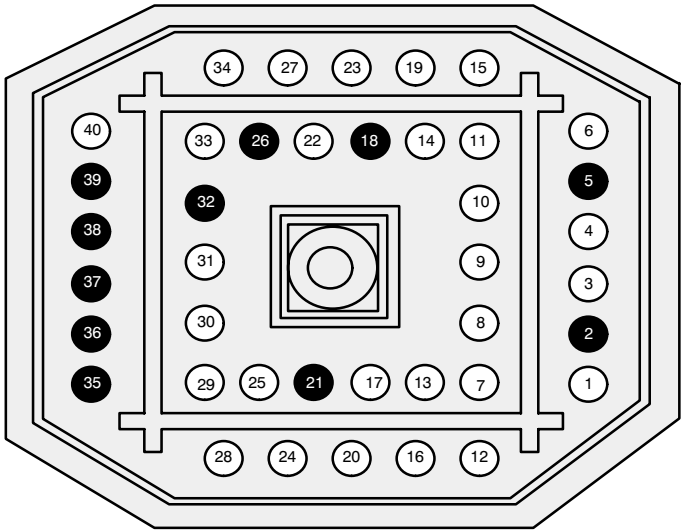
* POSTAL

14401



C135F

14290

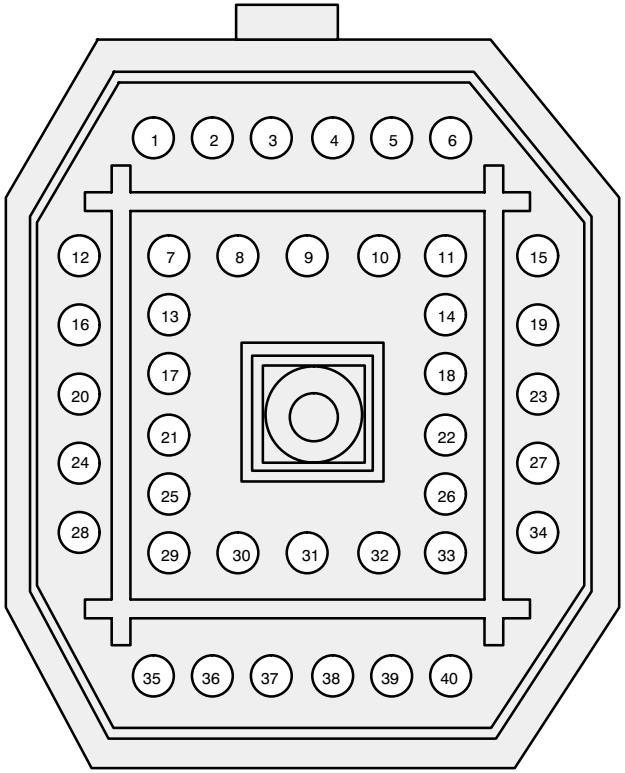


C135M

PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	57 (BK)	11	519 (LG/BK)	21	–	31	619 (PK/WH)
2	–	12 (M)	–	22	705 (LG/OG)		* –
3	1049 (BN/BK)		*B (RD/WH)		* –	32	–
	*56 (DB/OG)	12 (F)	–	23 (M)	–	33	3501 (DB)
4	13 (RD/BK)	13	–		*3396 (YE/LG)	34(M)	–
	*58 (WH)		*3827 (GY/WH)	23 (F)	–		*C (LB/WH)
5	–	14	170 (RD/LB)	24	1059 (LB/OG)	34 (F)	–
6 (M)	–		*Y (BK)	25 (M)	–	35 (M)	–
	*3397 (WH/RD)	15	518 (LG/RD)		*3035 (LG/OG)	35 (F)	57 (BK)
6 (F)	–	16 (M)	–	25 (F)	–		* –
7	–		*A (WH/PK)	26	–	36	–
	*3826 (WH)	16 (F)	–	27	3603 (RD)	37	–
8	810 (RD/LG)	17	3226 (BK/LG)	28	3601 (WH/RD)	38	–
9 (M)	–	18	–	29	523 (RD/PK)	39	–
	*3395 (OG/LB)	19	3600 (RD/WH)	30	524 (PK/BK)	40(M)	–
9 (F)	–	20	679 (GY/BK)				*181 (BN/OG)
10	298 (PK/OG)					40 (F)	–
	*931 (OG)						

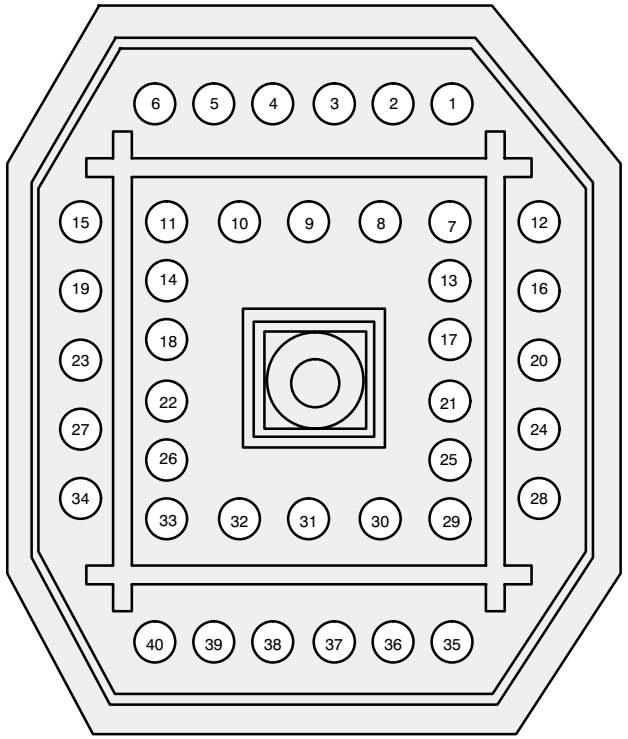
www.AUTOMOTIVEMECHANIC.org

14401



C136F

14290



C136M

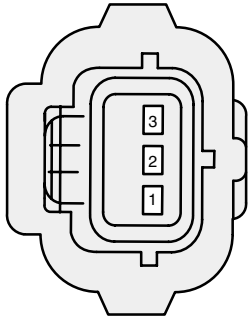
* POSTAL

PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	37 (YE)	12	3402 (WH/BK)	22	3036 (YE/WH)	31	3227 (RD)
2	3233 (BK/LB)	13	437 (YE/LG)	23	3404 (YE)	32	977 (PK/WH)
3	3233 (BK)	14	3042 (WH/BK)	24	2 (WH/LB)		*162 (LG/RD)
4	570 (BK)	15	3043 (WH/PK)		*5 (OG/LB)	33	295 (LB/PK)
5	3050 (WH/OG)	16	3400 (BN/LB)	25	914 (TN/OG)	34	647 (GY/LB)
6	3503 (YE)	17	57 (BK)	26	3069 (WH)	35	57 (BK)
7	436 (RD/LG)	18 (M)	3235 (BK/LB)	27	646 (YE/WH)	36	245 (BN/LG)
8	3052 (YE/LG)	18 (F)	3235 (YE/LG)	28	3 (LG/WH)	37	246 (VT)
9	3046 (YE)	19	1048 (LB/WH)		*9 (LG/OG)	38	1052 (TN/BK)
10	3045 (TN)	20	686 (TN/RD)	29	438 (RD/WH)	39	63 (RD)
11	3044 (LB)	21	915 (PK/LB)	30	601 (LB/PK)	40	671 (LB)

www.AUTOMOTIVEMECHANIC.org

150-7 CONNECTOR FACES

14290

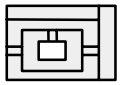


C137

BRAKE FLUID LEVEL SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	512 (TN/LG)	Brake Indicator, Control
3	977 (VT/WH)	Brake Indicator, Control

14290



C144

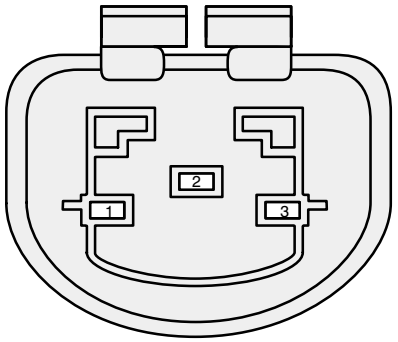
HORN

PIN	CIRCUIT	CIRCUIT FUNCTION
1	1 (DB)	Horn Switch Control

www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

14290

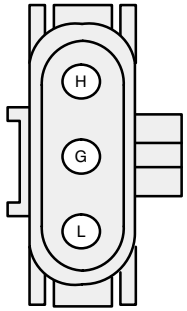


C147
LEFT HEADLAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	12 (LG/BK)	Power, Hot with High Beams On
2	57 (BK)	Ground
3	1055 (WH/LG)	Headlamp, Left – Fused Feed

POSTAL

14290



C147
LEFT HEADLAMP

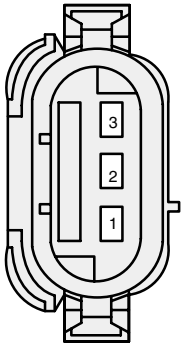
PIN	CIRCUIT	CIRCUIT FUNCTION
H	12 (LG/BK)	Power, Hot with High Beams On
G	57 (BK)	Ground
L	1055 (WH/LG)	Headlamp, Left – Fused Feed

www.AUTOMOTIVEMECHANIC.org

150-9 CONNECTOR FACES

EXCEPT POSTAL

14290

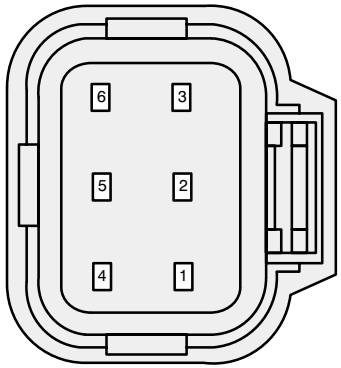


C148

LEFT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power, Exterior Lamps
3	3 (LG/WH)	Left Front Turn Lamps, Feed

www.AUTOMOTIVEMECHANIC.org

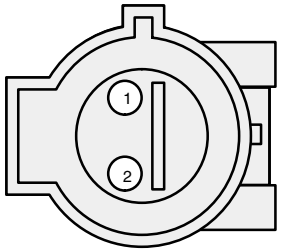


C150

DAYTIME RUNNING LAMPS (DRL) MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION
1	13 (RD/BK)	Power Hot in Low and Pass
2	196 (DB/OG)	Power Hot at All Times
3	298 (PK/OG)	Power Hot in Run
4	57 (BK)	Ground
5	12 (LG/BK)	High Beam Output
6	977 (PK/WH)	Brake Indicator Output

14290



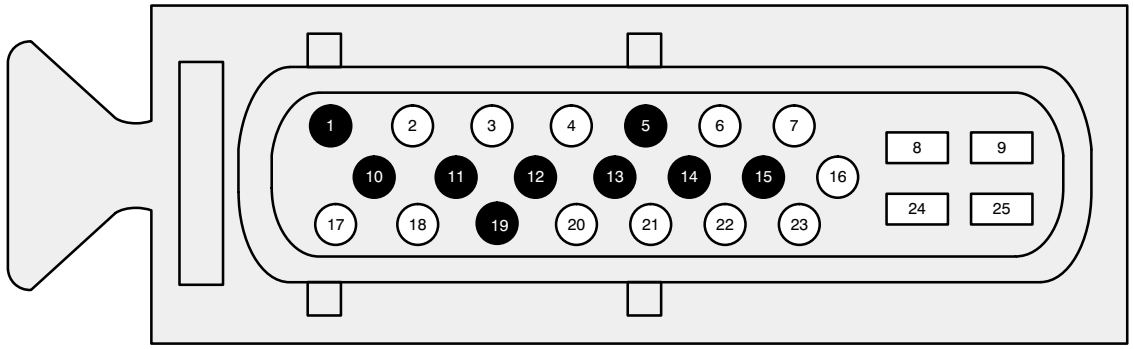
C151

LEFT FRONT ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	521 (TN/OG)	Left Front High Sensor
2	522 (TN/BK)	Left Front Low Sensor

www.AUTOMOTIVE MECHANIC.ORG

150-11 CONNECTOR FACES



C154

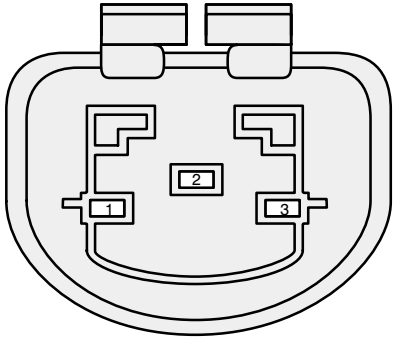
ANTI-LOCK BRAKE CONTROL MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	13	–	NOT USED
2	810 (RD/LG)	Brake Pedal Position Switch	14	–	NOT USED
3	516 (YE/BK)	Right Front Anti-Lock Brake Sensor (Low)	15	–	NOT USED
			16	603 (DG)	ABS Indicator
4	514 (YE/RD)	Right Front Anti-Lock Brake Sensor (High)	17	522 (TN/BK)	Left Front Anti-Lock Brake Sensor (Low)
5	–	NOT USED	18	521 (TN/OG)	Left Front Anti-Lock Brake Sensor (High)
6	523 (RD/PK)	Right Rear Anti-Lock Brake Sensor (High)	19	–	NOT USED
7	524 (PK/BK)	Right Rear Anti-Lock Brake Sensor (Low)	20	601 (LB/PK)	Power (Hot in Run)
			21	519 (LG/BK)	Left Rear Anti-Lock Brake Sensor (Low)
8	57 (BK)	Ground			
9	534 (YE/LG)	Power (Hot at all Times)	22	518 (LG/RD)	Left Rear Anti-Lock Brake Sensor (High)
10	–	NOT USED			
11	–	NOT USED	23	70 (LB/WH)	Data Link Connector (DLC)
12	–	NOT USED	24	57 (BK)	Ground
			25	483 (RD)	ABS Continuous Power

www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

14290

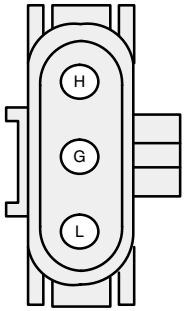


C155
RIGHT HEADLAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	12 (LG/BK)	Power, Hot with High Beams On
2	57 (BK)	Ground
3	1055 (WH/LG)	Headlamp, Left – Fused Feed

POSTAL

14290



C155
RIGHT HEADLAMP

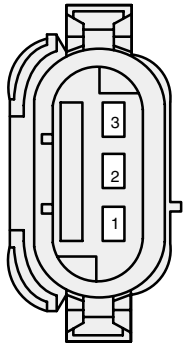
PIN	CIRCUIT	CIRCUIT FUNCTION
H	12 (LG/BK)	Power, Hot with High Beams On
G	57 (BK)	Ground
L	1055 (WH/LG)	Headlamp, Left – Fused Feed

www.AUTOMOTIVEMECHANIC.org

150-13 CONNECTOR FACES

EXCEPT POSTAL

14290



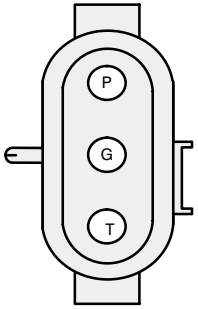
C156

RIGHT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power, Exterior Lamps
3	2 (WH/LB)	Right Front Turn Lamps, Feed

POSTAL

14290



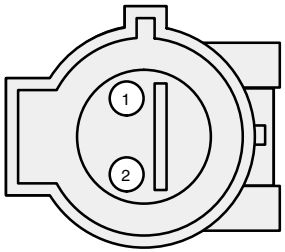
C156

RIGHT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
P	14 (BN)	Power, Exterior Lamps
G	57 (BK)	Ground
T	2 (WH/LB)	Right Front Turn Lamps, Feed

www.AUTOMOTIVEMECHANIC.ORG

14290

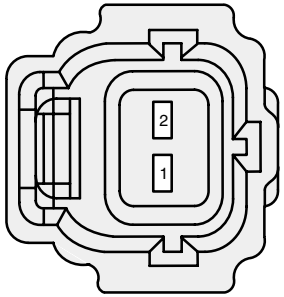


C158
RIGHT FRONT ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	514 (YE/RD)	Right Front High Sensor
2	516 (YE/BK)	Right Front Low Sensor

EXCEPT POSTAL

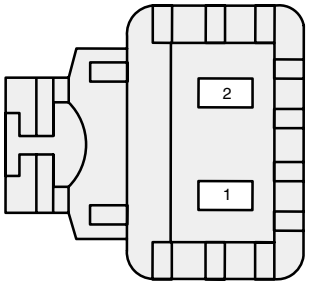
14290



C164
WINDSHIELD WASHER PUMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	941 (BK/WH)	Power Feed
2	57 (BK)	Ground

14290

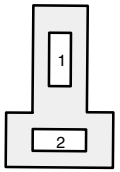


C161
BLOWER MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	181 (BN/OG)	Blower Motor to Switch – High
2	758 (VT/WH)	Blower Motor Relay, Switched Output

POSTAL

14290



C164
WINDSHIELD WASHER PUMP

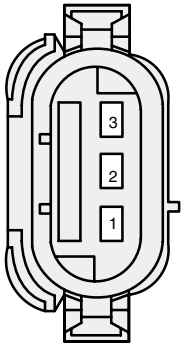
PIN	CIRCUIT	CIRCUIT FUNCTION
1	941 (BK/WH)	Power Feed
2	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.org

150-15 CONNECTOR FACES

EXCEPT POSTAL

14290



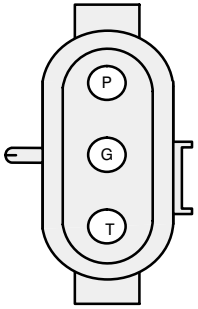
C180

LEFT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power, Exterior Lamps
3	3 (LG/WH)	Left Front Turn Lamps, Feed

POSTAL

14290



C180

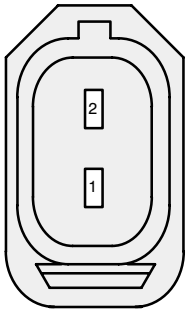
LEFT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
P	14 (BN)	Power, Exterior Lamps
G	57 (BK)	Ground
T	3 (LG/WH)	Left Front Turn Lamps, Feed

www.AUTOMOTIVEMECHANIC.ORG

EXCEPT POSTAL

14290

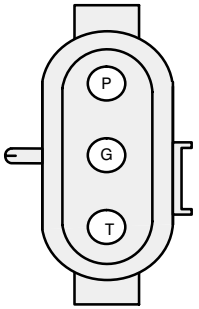


C181
LEFT FRONT SIDE LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	14 (BN)	Power, Exterior Lamps
2	57 (BK)	Ground

POSTAL

14290



C181
LEFT FRONT SIDE LAMP

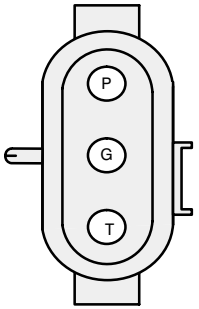
PIN	CIRCUIT	CIRCUIT FUNCTION
P	14 (BN)	Power, Exterior Lamps
G	57 (BK)	Ground
T	3 (LG/WH)	Left Front Side Lamp Feed

www.AUTOMOTIVEMECHANIC.org

150-17 CONNECTOR FACES

POSTAL

14290



C182

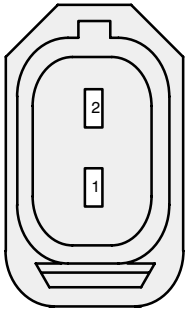
RIGHT FRONT PARK/TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
P	57 (BK)	Ground
T	14 (BN)	Power, Exterior Lamps
G	2 (WH/LB)	Right Front Side Lamp Feed

www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

14290

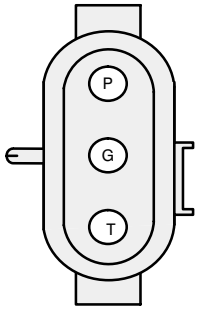


C183
RIGHT FRONT SIDE LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	14 (BN)	Power, Exterior Lamps
2	57 (BK)	Ground

POSTAL

14290



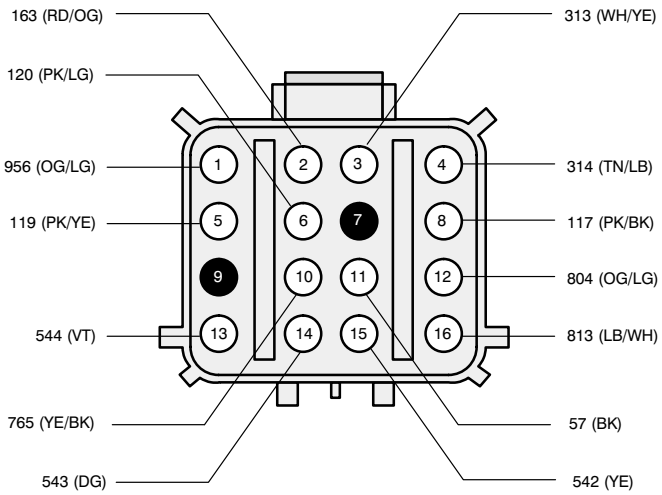
C183
RIGHT FRONT SIDE LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
P	14 (BN)	Power, Exterior Lamps
G	57 (BK)	Ground
T	2 (WH/LB)	Right Front Side Lamp Feed

www.AUTOMOTIVEMECHANIC.org

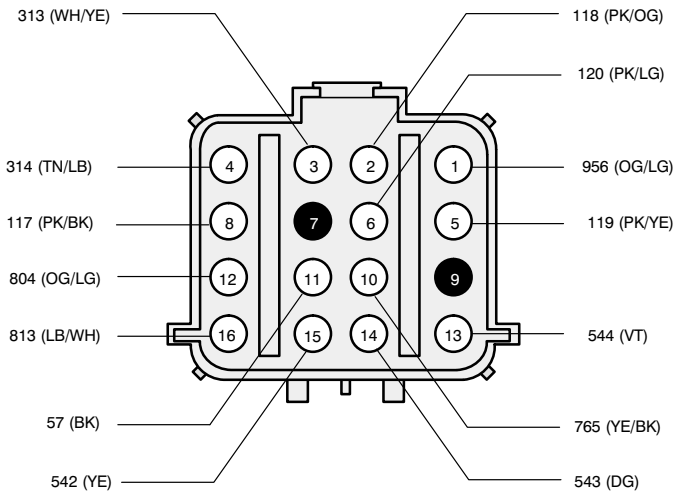
150-19 CONNECTOR FACES

14631/19A044



C200M

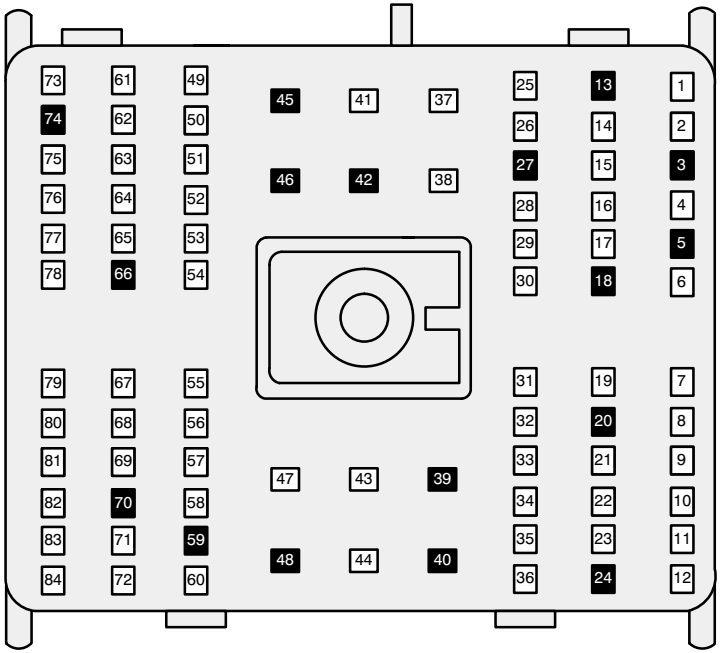
13A724



C200F

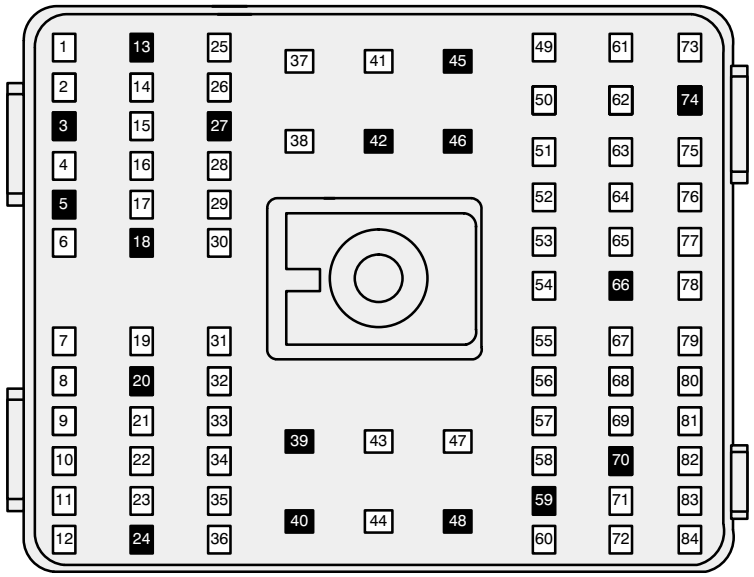
www.AUTOMOTIVEMECHANIC.org

14401



C201F

13A724



C201M

PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
1	3012 (WH)	14	803 (BN/BK)	27	–	40	–
2	3603 (RD)	15	3600 (RD/WH)	28	3835 (YE/RD)	41	57 (BK)
3	–	16	3601 (WH/RD)	29	3011 (BK/OG)	42	–
4	162 (LG/RD)	17	3013 (GY/BK)	30	3014 (BK/WH)	43	400 (LB/BK)
5	–	18	–	31	33 (WH/BK)	44	903 (RD)
6	3015 (WH/RD)	19	3010 (TN)	32	117 (PK/BK)	45	–
7	524 (PK/BK)	20	–	33	3235 (YE/LG)	46	–
8	518 (LG/RD)	21	679 (GY/BK)	34	3837 (GY/YE)	47	314 (TN/LB)
9	523 (RD/PK)	22	519 (LG/BK)	35	55 (BK/PK)	48	–
10	14 (BN)	23	118 (PK/OG)	36	491 (OG/LB)	49	3404 (YE)
11	915 (PK/LB)	24	–	37	991 (TN/LB)	50	3005 (PK/LG)
12	3004 (VT/LG)	25	3836 (YE/LB)	38	313 (WH/YE)	51	3997 (DG)
13	–	26	802 (OG/RD)	39	–	52	276 (BN)

www.AUTOMOTIVEMECHANIC.ORG

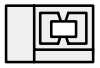
150-21 CONNECTOR FACES

PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT	PIN NUMBER	CIRCUIT
53	3501 (DB)	61	543 (DG)	69	511 (LG)	77	3991 (TN)
54	3503 (RD)	62	544 (PK)	70	–	78	765 (YE/BK)
55	804 (OG/LG)	63	3233 (BK/LB)	71	914 (TN/OG)	79	53 (BK/LB)
56	542 (YE)	64	3233 (BK/LB)	72	85 (BN/LB)	80	800 (GY/LB)
57	810 (RD/LG)	65	640 (RD/YE)	73	119 (PK/YE)	81	298 (VT/OG)
58	120 (PK/LG)	66	–	74	–	82	374 (DB/WH)
59	–	67	813 (LB/WH)	75	3986 (DG)	83	569 (DG)
60	378 (BN/YE)	68	801 (TN/YE)	76	603 (DG)	84	956 (OG/LG)

www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

13A724

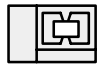


C202
PARK BRAKE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	162 (LG/RD)	Switch Power Feed

POSTAL

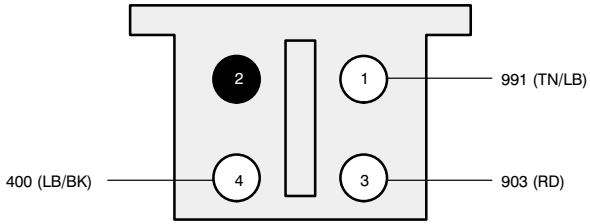
14401



C202
PARK BRAKE SWITCH

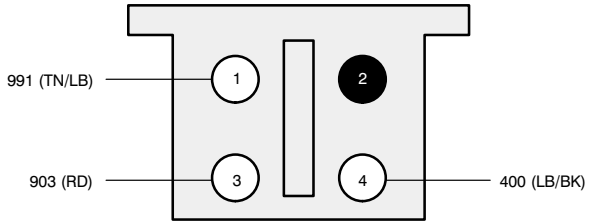
PIN	CIRCUIT	CIRCUIT FUNCTION
1	162 (LG/RD)	Switch Power Feed

13A724



C203M

14631

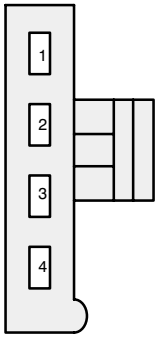


C203F

www.AUTOMOTIVE MECHANIC.ORG

150-23 CONNECTOR FACES

14401

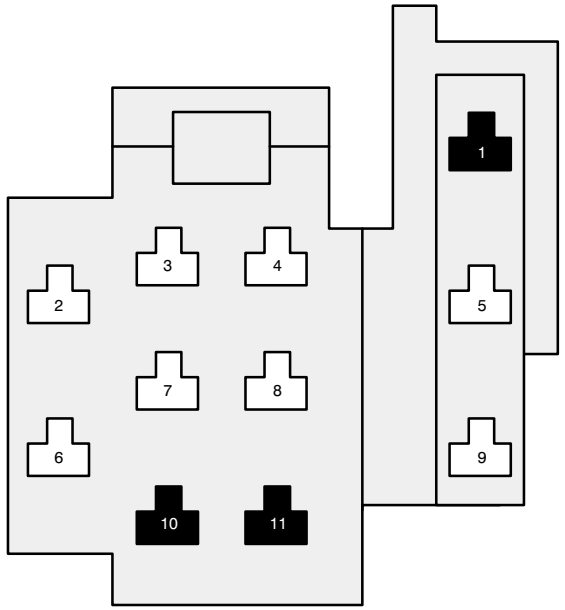


C204

INSTRUMENT PANEL DIMMING MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION
1	19 (LB/RD)	Power, Hot with Lamps On
2	55 (BK/PK)	Cargo Lamp, Output
3	1011 (TN/OG)	Power, Dimmer Module
4	705 (LG/OG)	Battery Saver Relay, Switched Power

14401



C205

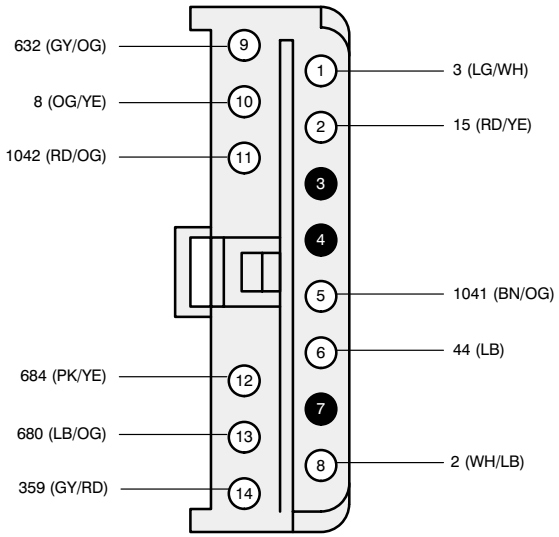
PARK BRAKE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	15 (RD/YE)	Headlamps
3	14 (BN)	Park/Tail Lamps
4	584 (YE)	Power (Start or Run)
5	195 (TN/WH)	Power (Hot At All Times)
6	196 (DB/YE	Power (Hot At All Times)
7	57 (BK)	Ground
8	484 (OG/BK)	Instrument Panel Display
9	19 (LB/RD)	Power (Hot with Lamps On)
10	–	NOT USED
11	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

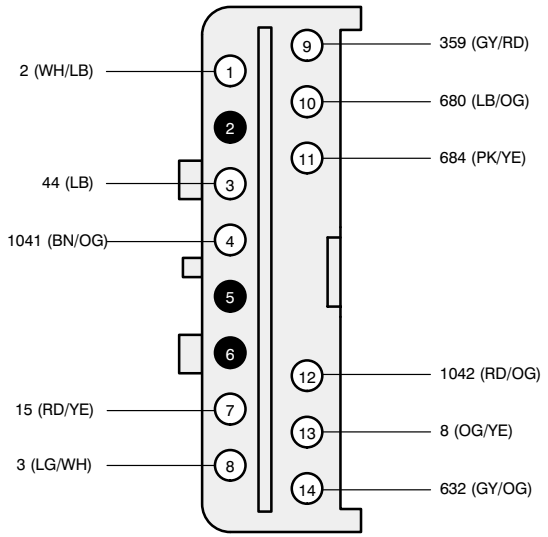
POSTAL

14401



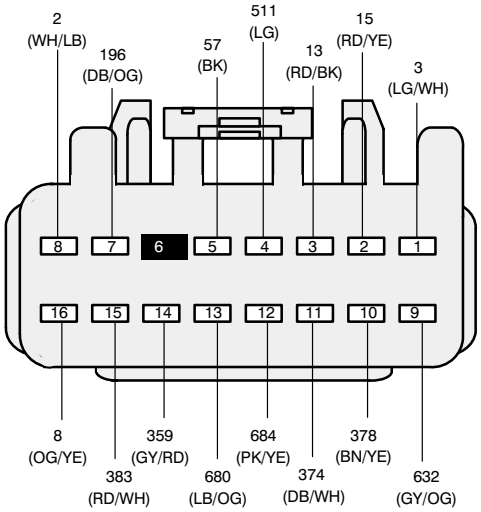
C208F

14A320



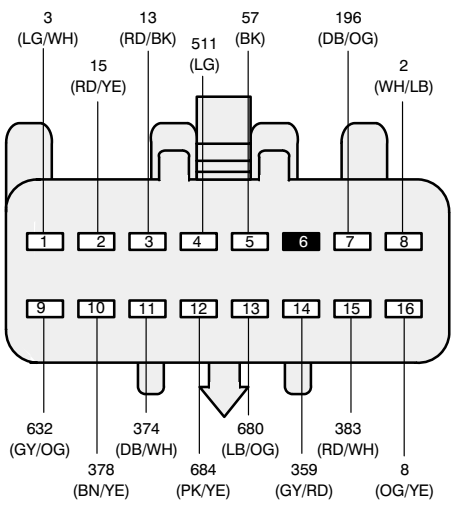
C208M

14401



C208F

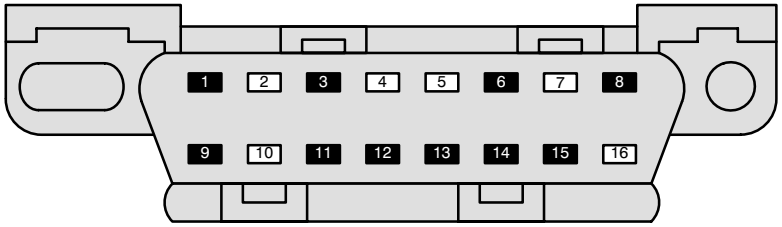
14A320



C208M

www.AUTOMOTIVE MECHANIC.ORG

150-25 CONNECTOR FACES

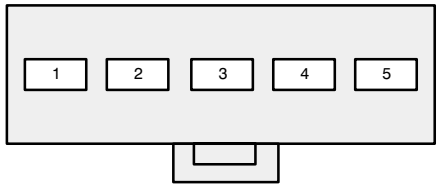


C209

DATA LINK CONNECTOR (DLC)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	914 (TN/OG)	J1850 Bus Plus/Data Plus
3	–	NOT USED
4	57 (BK)	Ground
5	570 (BK/WH)	Communication Network Ground
6	–	NOT USED
7	70 (LB/WH)	ISO 9141 Link
8	–	NOT USED
9	–	NOT USED
10	915 (PK/LB)	J1850 Bus Minus/Data Minus
11	–	NOT USED
12	–	NOT USED
13	–	NOT USED
14	–	NOT USED
15	–	NOT USED
16	693 (OG)	Module Diagnostic

www.AUTOMOTIVEMECHANIC.org

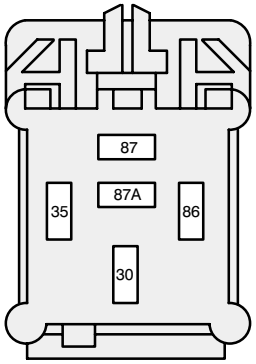


C210

BRAKE PEDAL POSITION (BPP) SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	10 (LG/RD)	Power (Hot at All Times)
2	511 (LG)	Stop Lamp Relay
3	10 (LG/RD)	Power (Hot at All Times)
4	810 (RD/LG)	ISO 9141 Link
5	57 (BK)	Ground

14A320



C211

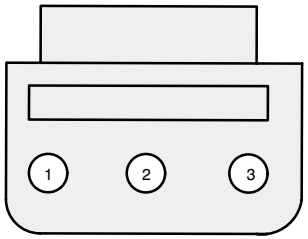
TURN SIGNAL RELAY FLASHER

PIN	CIRCUIT	CIRCUIT FUNCTION
30	8 (OG/YE)	Turn Signal Flasher Feed
85	383 (RD/WH)	Power, Hot At All Times
86	57 (BK)	Ground
87	44 (LB)	Output
87A	385 (WH/RD)	Emergency Warning Switch

www.AUTOMOTIVEMECHANIC.org

150-27 CONNECTOR FACES

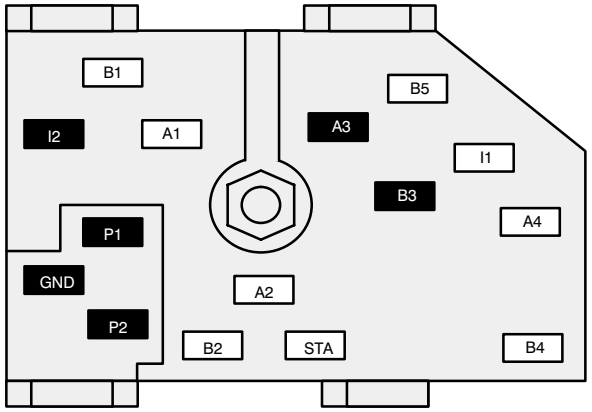
14401



C212

SHIFT LOCK ACTUATOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	810 (RD/LG)	Brake Pedal Position Switch Input
2	57 (BK)	Grounds
3	1003 (GY/YE)	Voltage in Run (Overload Protected)

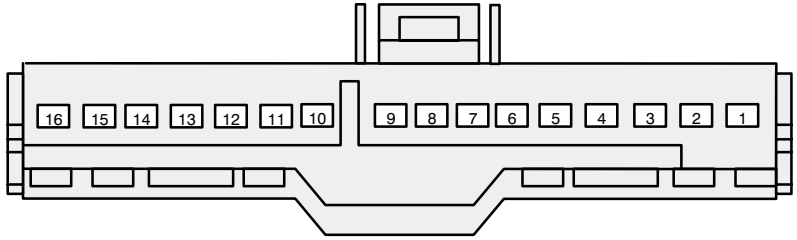


C213

IGNITION SWITCH

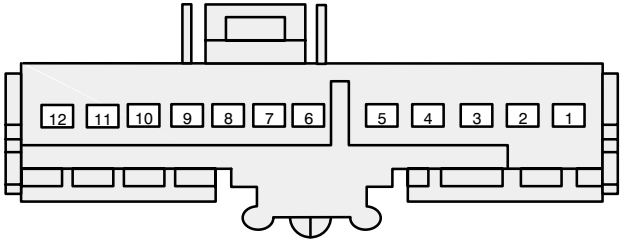
PIN	CIRCUIT	CIRCUIT FUNCTION
A1	297 (BK/LG)	Hot in Acc or Run Output
A2	687 (GY/YE)	Power (Hot in Run)
A3	–	NOT USED
A4	687 (GY/YE)	Power (Hot in Run)
B1	37 (YE)	Battery Input
B2	37 (YE)	Battery Input
B3	–	NOT USED
B4	37 (YE)	Battery Input
B5	37 (YE)	Battery Input
GND	–	NOT USED
I1	1050 (LG/VT)	Hot in Start or Run Output
I2	–	NOT USED
P1	–	NOT USED
P2	–	NOT USED
STA	32 (RD/LB)	Hot in Start Output

www.AUTOMOTIVEMECHANIC.org



C214
INSTRUMENT CLUSTER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3046 (YE)	Auxiliary Battery Indicator Lamp
2	3043 (WH/VT)	Low Oil Pressure Indicator Lamp
3	3400 (BN/LB)	Power Limit Warning Indicator Lamp
4	3049 (BK/LG)	Power (From IAA Module)
5	3044 (LB)	Economy Mode Indicator Lamp
6	19 (LB/RD)	Illumination Input Lamp
7	3041 (BK)	Charge Indicator Lamp
8	2 (WH/LB)	Right Turn Signal Input
9	3407 (RD/WH)	Electrical Hazard Warning Indicator Lamp
10	3047 (YE/WH)	Distance to Empty (DTE) Gauge Input
11	3406 (DG/LG)	Temperature Gauge Input
12	3049 (BK/LG)	Power (From IAA Module)
13	3405 (GY/RD)	Motor Enabled Gauge Input
14	679 (GY/BK)	Vehicle Speed Signal Input
15	3408 (DB/OG)	Economy Gauge Input
16	57 (BK)	Ground

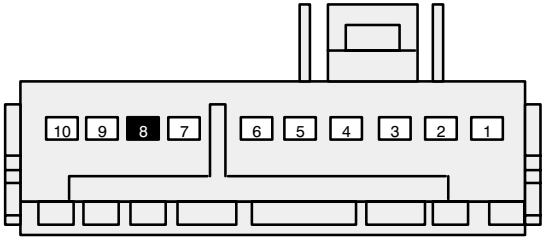


C215
INSTRUMENT CLUSTER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	742 (LB)	Power (Hot At All Times)
2	3402 (WH/BK)	Power Reset Indicator Lamp
3	19 (LB/RD)	Illumination Input Lamp
4	3048 (OG)	Traction Battery State of Charge (SOC) Gauge Input
5	484 (OG/BK)	Main Light Switch
6	570 (BK/WH)	Ground
7	3042 (PK/LG)	Low State of Charge (SOC) Indicator Lamp
8	3045 (TN)	Malfunction Indicator Lamp (MIL)
9	627 (BK/OG)	Generic Electronic Module (Door Ajar Indicator) Input
10	742 (LB)	Power (Hot At All Times)
11	3049 (BK/LG)	Power (From IAA Module)
12	742 (LB)	Power (Hot At All Times)

www.AUTOMOTIVEMECHANIC.org

150-29 CONNECTOR FACES

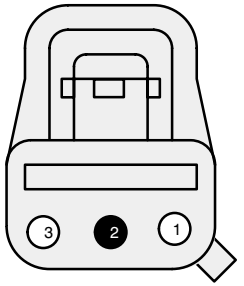


C216

INSTRUMENT CLUSTER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	12 (LG/BK)	Power (Hot in HI or Pass)
2	57 (BK)	Ground
3	608 (BK/YE)	Air Bag Indicator Lamp
4	584 (YE)	Power (Hot in Start or Run)
5	3 (LG/WH)	Left Turn Signal Input
6	603 (DG)	ABS Indicator Lamp
7	977 (VT/WH)	Brake Warning Indicator Lamp
8	–	NOT USED
9	742 (LB)	Power (Hot At All Times)
10	871 (YE)	Seat Belt Indicator Lamp

14401



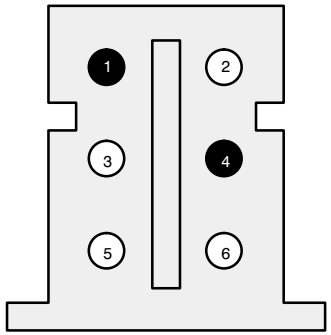
C218

CLOCKSPRING ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION
1	615 (GY/WH)	Driver Air Bag, Return
2	–	NOT USED
3	614 (GY/OG)	Driver Air Bag, Feed, Monitor

www.AUTOMOTIVEMECHANIC.org

14401



C219
PARK BRAKE SWITCH

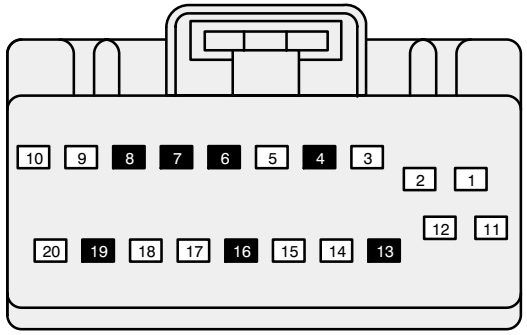
PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	6 (YE/LG)	Horn Relay
3	19 (LB/RD)	Instrument Panel, Power Feed
4	–	NOT USED
5	570 (BK/WH)	Ground
6	158 (BK/PK)	Key Warning, Switch

www.AUTOMOTIVEMECHANIC.ORG

150-31 CONNECTOR FACES

* POSTAL

14401



C221

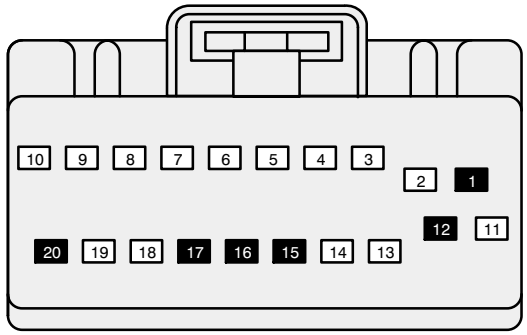
GENERIC ELECTRONIC MODULE (GEM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	1001 (WH/YE)	Power (Hot at All Times)	12	996 (OG/WH)	One Touch Down Sense (Low)
2	570 (BK/WH)	Power Ground		* –	NOT USED
3	70 (LB/WH)	Data Link Connector (DLC)	13	–	NOT USED
4	–	NOT USED	14	679 (GY/BK)	Vehicle Speed Sensor Output (RABS)
5	85 (BN/LB)	Safety Belt Swtich Input	15	640 (RD/YE)	Warning Lamp Feed
	* –	NOT USED	16	–	NOT USED
6	–	NOT USED	17	1002 (BK/PK)	Ignition (Hot in Acc or Run)
7	–	NOT USED	18	158 (BK/PK)	Ignition Key Warning Switch Input (Hot in Acc or Run)
8	–	NOT USED			
9	684 (PK/YE)	Wiper Mode Select Switch	19	–	NOT USED
10	680 (LB/OG)	Internal Delay/Wash Input	20	359 (GY/RD)	Signal Return
11	995 (GY)	One Touch Down Sense (High)			
	* –	NOT USED			

www.AUTOMOTIVEMECHANIC.ORG

* POSTAL

14401



C224

GENERIC ELECTRONIC MODULE (GEM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	11	991 (TN/LB)	Down Window Command Input
2	671 (LB)	Wiper Sense Input		* –	NOT USED
3	627 (BK/OG)	Door Ajar Indicator Output	12	–	NOT USED
	* –	NOT USED	13	765 (YE/BK)	Left Door Switch Input
4	646 (YE/WH)	Wiper Run/Park Relay Control		* –	NOT USED
5	647 (GY/LB)	Wiper High/Low Relay Control	14	761 (GY/RD)	Right Door Switch Input
6	871 (YE)	Safety Belt Indicator Control		* –	NOT USED
	* –	NOT USED	15	–	NOT USED
7	1008 (LG/OG)	Interior Lamp Relay Control	16	–	NOT USED
	* –	NOT USED	17	–	NOT USED
8	1005 (VT/OG)	GEM Battery Saver Output Module	18	14 (BN)	Tail Lamps Feed
9	1007 (YE/RD)	One Touch Down Relay Output	19	183 (TN/YE)	Tone Generator
	* –	NOT USED		* –	NOT USED
10	686 (TN/RD)	Wiper Pump Relay Control	20	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

150-33 CONNECTOR FACES

14401

C226

CIGAR LIGHTER

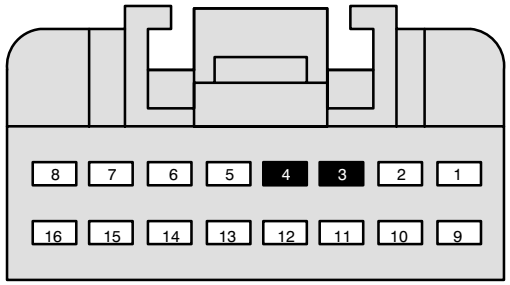
PIN	CIRCUIT	CIRCUIT FUNCTION
1	40 (LB/WH)	Cigar Lighter, Feed

14401

C227

CIGAR LIGHTER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground



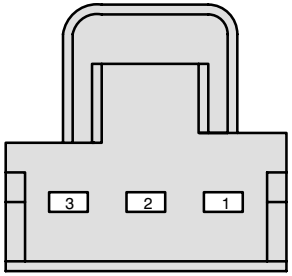
C228

RADIO

PIN	CIRCUIT	CIRCUIT FUNCTION
1	19 (LB/RD)	Instrument Illumination
2	57 (BK)	Ground
3	–	NOT USED
4	–	NOT USED
5	802 (OG/RD)	Right Rear Speaker (+)
6	803 (BN/PK)	Right Rear Speaker (–)
7	805 (WH/LG)	Right Front Speaker (+)
8	811 (DG/OG)	Right Front Speaker (–)
9	797 (LG/PK)	Power (Hot at All Times)
10	137 (YE/BK)	Power (Hot in Run)
11	694 (BK/LG)	Ground
12	800 (GY/LB)	Left Rear Speaker (+)
13	801 (TN/YE)	Left Rear Speaker (–)
14	804 (OG/LG)	Left Front Speaker (+)
15	813 (LB/WH)	Left Front Speaker (–)
16	694 (BK/LG)	Ground

www.AUTOMOTIVEMECHANIC.org

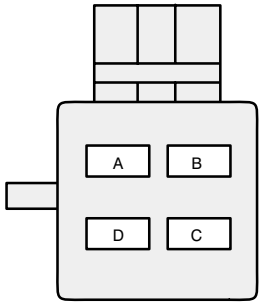
14401



C231
CLIMATE CONTROL ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3057 (LG/OG)	(5V) Power
2	3058 (LG/RD)	Return Signal
3	3059 (YE/LG)	Ground

14401



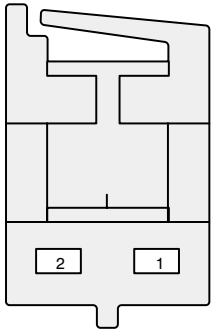
C232
CLIMATE CONTROL ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION
A	754 (LG/WH)	Speed Control, High
B	57 (BK)	Ground
C	752 (YE/RD)	Speed Control, Medium
D	751 (DB/WH)	Speed Control, Low

www.AUTOMOTIVE MECHANIC.ORG

150-35 CONNECTOR FACES

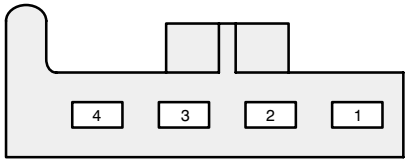
14401



C233
HEATER CONTROL ASSEMBLY
OR
A/C-HEATER CONTROL ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION
1	19 (LB/RD)	Power Feed
2	57 (BK)	Ground

14401

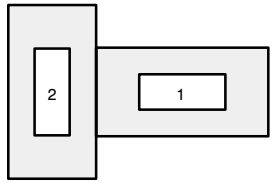


C234
HEATER CONTROL ASSEMBLY
OR
A/C-HEATER CONTROL ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	3055 (BN/LG)	A/C, Power
3	3056 (TN/LG)	Climate Control, Power
4	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.org

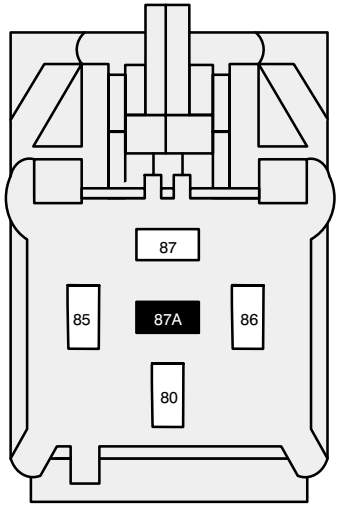
14401



C235
POWER POINT

PIN	CIRCUIT	CIRCUIT FUNCTION
1	1049 (BN/PK)	Voltage Supplied At All Times (Overload Protected)
2	57 (BK)	Ground

14401

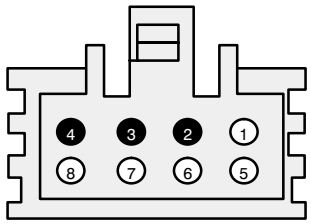


C239
ACCESSORY DELAY RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	400 (LB/BK)	Output
85	57 (BK)	Ground
86	1002 (BK/PK)	Ignition (Hot In Acc or Run)
87	170 (RD/LB)	Power (Hot At All Times)
87A	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

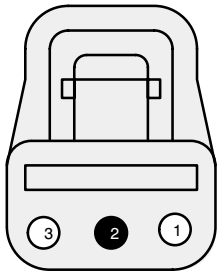
150-37 CONNECTOR FACES



C240
BLEND DOOR ACTUATOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	437 (YE/LG)	Actuator Position Signal (Output)
2	–	NOT USED
3	–	NOT USED
4	–	NOT USED
5	438 (RD/WH)	Blend Door Actuator Ground
6	436 (RD/LG)	Blend Door Actuator +5V (Input)
7	245 (BN/LG)	Blend Door Motor 1
8	246 (VT)	Blend Door Motor 2

14401

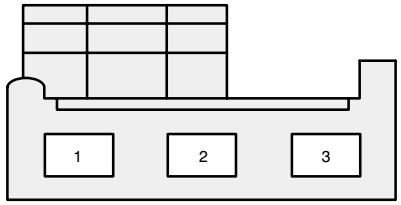


C242
PASSENGER AIR BAG MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION
1	616 (PK/BK)	Passenger Air Bag, Return
2	–	NOT USED
3	607 (LB/OG)	Passenger Air Bag, Feed, Monitor

www.AUTOMOTIVEMECHANIC.org

14401



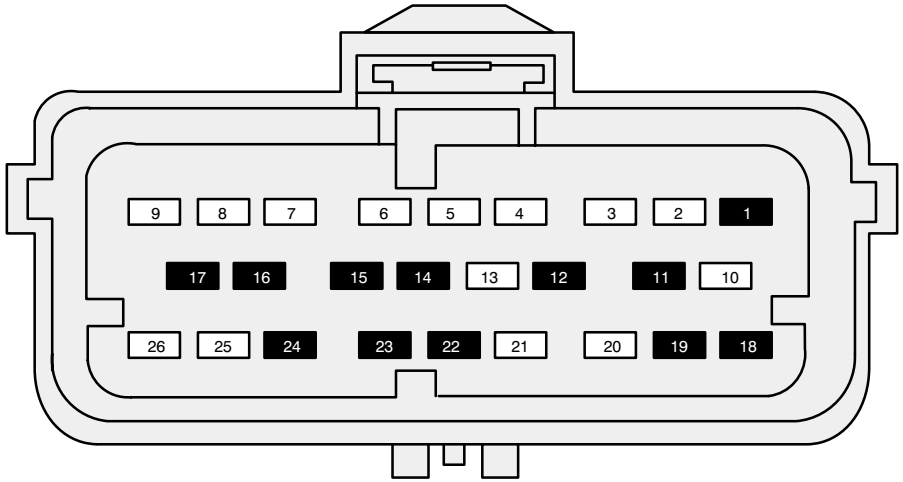
C249
INERTIA SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3069 (WH)	Relay Signal
2	1048 (LB/WH)	Power (Hot In Acc or Run)
3	974 (OG)	Output

www.AUTOMOTIVE MECHANIC.ORG

150-39 CONNECTOR FACES

14401



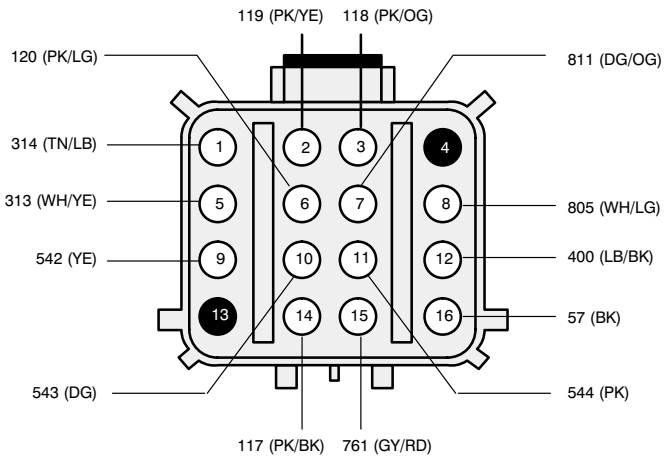
C250

AIR BAG DIAGNOSTIC MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	13	364 (BK/LG)	Power (Hot in Run)
2	364 (BK/LG)	Power (Hot in Run)	14	–	NOT USED
3	614 (GY/OG)	Driver Air Bag	15	–	NOT USED
4	615 (GY/WH)	Driver Air Bag	16	–	NOT USED
5	70 (LB/WH)	Data Link Connector	17	–	NOT USED
6	607 (LB/OG)	Passenger Air Bag Module	18	–	NOT USED
7	616 (PK/BK)	Passenger Air Bag	19	–	NOT USED
8	1112 (WH/LG)	Passenger Air Bag Deactivation (PAD) Module	20	608 (BK/YE)	Warning Indicators
			21	649 (BK/YE)	Ground
9	1113 (YE/LG)	Passenger Air Bag Deactivation (PAD) Module Illumination	22	–	NOT USED
			23	–	NOT USED
10	649 (BK/OG)	Ground	24	–	NOT USED
11	–	NOT USED	25	619 (PK/WH)	Crash Sensors
12	–	NOT USED	26	183 (TN/YE)	Generic Electronic Module (GEM)

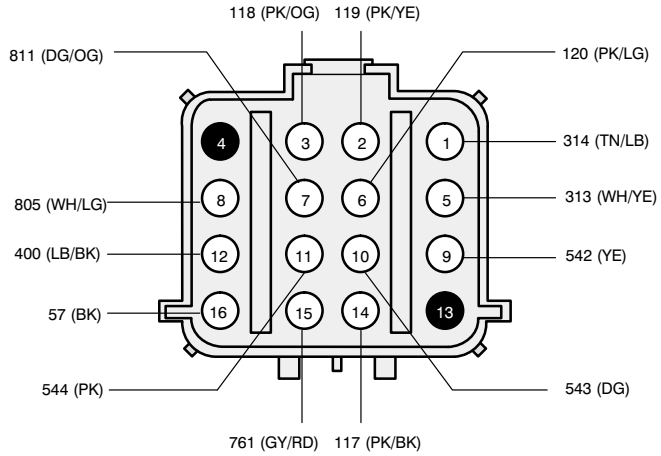
www.AUTOMOTIVEMECHANIC.org

14401



C252M

14630/19A041

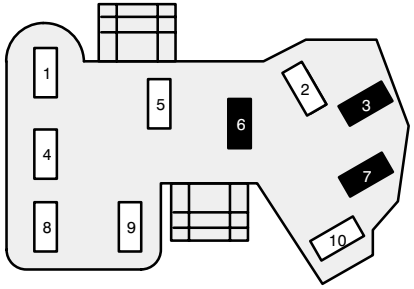


C252F

www.AUTOMOTIVEMECHANIC.org

150-41 CONNECTOR FACES

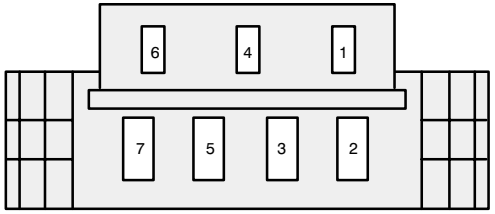
14A320



C253
MULTIFUNCTION SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	44 (LB)	Turn Signal Flasher, to Turn Signal Switch
2	378 (BN/YE)	Trailer Tow Connector, Output
3	–	NOT USED
4	385 (WH/RD)	Voltage Supplied At All Times (Overload Protected)
5	2 (WH/RD)	Turn Lamps, Feed, Right Front
6	–	NOT USED
7	–	NOT USED
8	3 (LG/WH)	Turn Lamps, Feed, Left Front
9	511 (LG)	Brake Pedal Position Switch, to Stoplamps
10	374 (DB/WH)	Trailer Tow Connector, Output

14A320

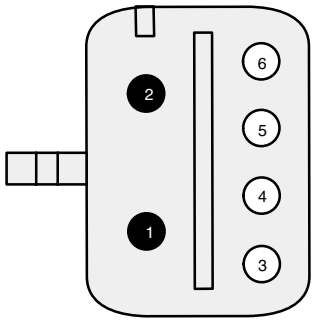


C254
MULTIFUNCTION SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	684 (PK/YE)	Wiper/Washer, Input
2	15 (RD/YE)	Power (Hot with Headlamps On)
3	13 (RD/BK)	Power (Hot with Low Beams On)
4	359 (GY/RD)	Signal, Return
5	632 (GY/OG)	Power (Hot with High Beams On)
6	680 (LB/OG)	Wiper/Washer, Delay Input
7	196 (DB/OG)	Voltage Supplied At All Times (Overload Protected)

www.AUTOMOTIVEMECHANIC.org

14401

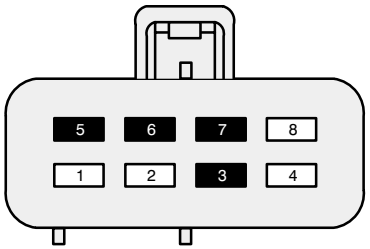


C256
PASSENGER AIR BAG DEACTIVATION (PAD) SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	1112 (WH/LB)	Passenger Air Bag Diagnostic (PAD) Module
4	649 (BK/OG)	Ground
5	364 (BK/LG)	Power (Hot in Run)
6	1113 (YE/LG)	Passenger Air Bag Deactivation Module Illumination

POSTAL

14401



C257
HAZARD SWITCH

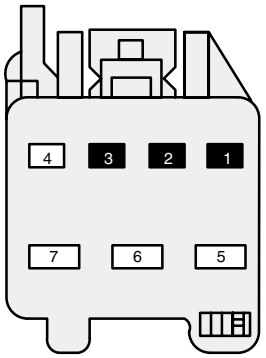
PIN	CIRCUIT	CIRCUIT FUNCTION
1	A (YE/RD)	Hazard Flasher Relay Control
2	383 (RD/WH)	Power (Hot At All Times)
3	–	NOT USED
4	57 (BK)	Ground
5	–	NOT USED
6	–	NOT USED
7	–	NOT USED
8	378 (BN/YE)	Rear Hazard Only Relay Control

www.AUTOMOTIVEMECHANIC.org

150-43 CONNECTOR FACES

POSTAL

14401

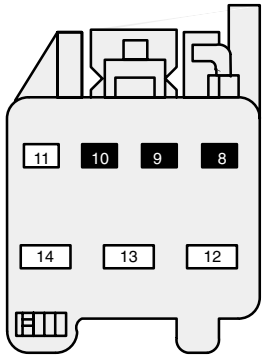


C260
MAIN LIGHT SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	–	NOT USED
4	57 (BK)	Ground
5	19 (LB/RD)	Instrument Panel Lamps Feed
6	15 (RD/YE)	Headlamp Dimmer Switch Feed
7	196 (DB/OG)	Headlamp Flash-to-Pass Switch Feed

POSTAL

14401



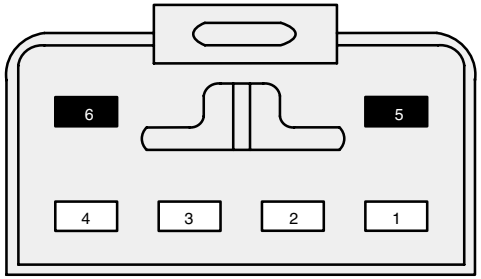
C261
MAIN LIGHT SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
8	–	NOT USED
9	–	NOT USED
10	–	NOT USED
11	1011 (TN/OG)	Pulse Width Dimmer Module - Fused Feed
12	53 (BK/LG)	Courtesy Lamp Switch to Courtesy Lamp
13	195 (TN/WH)	Tail Lamp Switch Feed
14	14 (BN)	Headlamp Switch to Tail Lamps and Side Marker Lamps

www.AUTOMOTIVEMECHANIC.org

POSTAL

14401

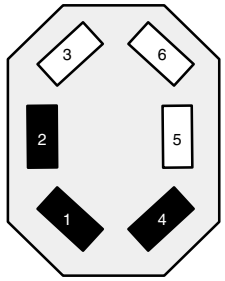


C262
PREHEAT SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	X (LG/BK)	Preheat Ignition Relay, Feed
2	19 (LB/RD)	Instrument Panel Lamps Feed
3	57 (BK)	Ground
4	W (RD/LG)	Preheat Inverter Relay, Signal
5	–	NOT USED
6	–	NOT USED

POSTAL

14401



C270
DASH FAN SWITCH

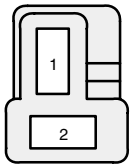
PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	S (RD)	Power Feed
4	–	NOT USED
5	797 (LG/VT)	Power (Hot At All Times)
6	R (LG)	Ground

www.AUTOMOTIVEMECHANIC.org

150-45 CONNECTOR FACES

POSTAL

14401

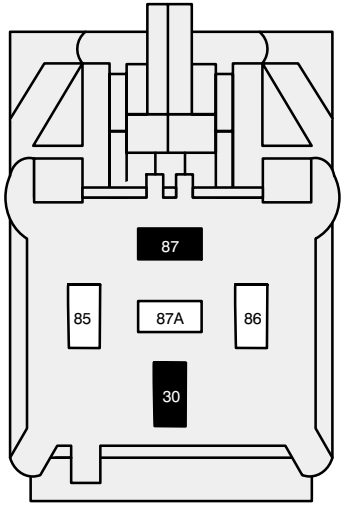


C271
DASH FAN

PIN	CIRCUIT	CIRCUIT FUNCTION
1	R (LG)	Ground
2	S (RD)	Dash Fan Switch Feed

POSTAL

14401

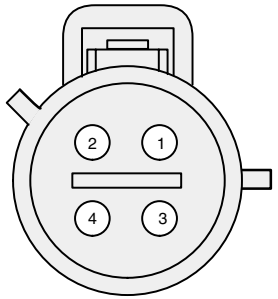


C272
HAZARD FLASHER RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	–	NOT USED
85	A (YE/RD)	Hazard Flasher Relay Control
86	57 (BK)	Ground
87	–	NOT USED
87A	378 (BN/YE)	Fused Power to Turn/Park Lamps

www.AUTOMOTIVEMECHANIC.org

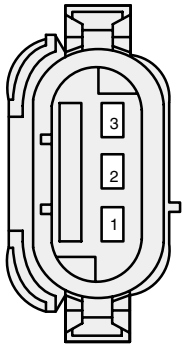
14401



C303
SAFETY BELT SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	1080 (LG/BK)	Driver Safety Belt, Return
3	85 (BN/LB)	Safety Belt Buckle Switch, Input
4	1080 (LG/BK)	Driver Safety Belt, Return

13A409



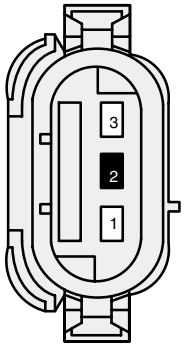
C400
LEFT REAR PARK/STOP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power, Exterior Lamps
3	511 (LG)	Brakes (On/Off)

www.AUTOMOTIVEMECHANIC.org

150-47 CONNECTOR FACES

13A409

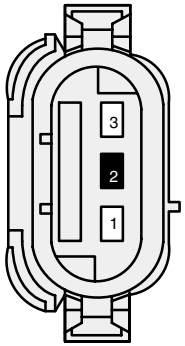


C401

LEFT BACKUP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	–	NOT USED
3	140 (BK/PK)	Left Rear Backup Lamp Feed

13A409



C402

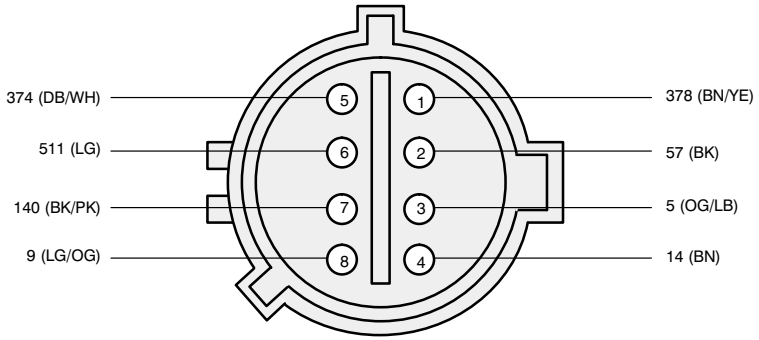
LEFT REAR TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	–	NOT USED
3	9 (LG/OG)	Left Rear Turn Lamp Feed

www.AUTOMOTIVEMECHANIC.org

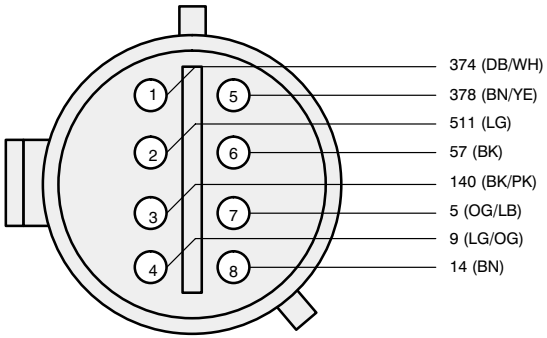
C403F

13A409

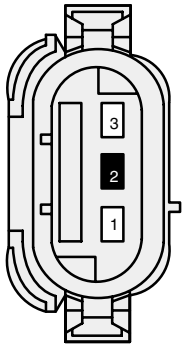


C403M

14405



13A409



C404

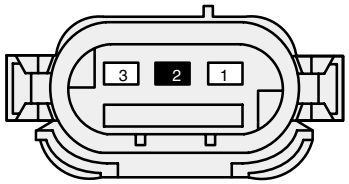
RIGHT REAR PARK/STOP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power, Exterior Lamps
3	511 (LG)	Brake (On/Off)

www.AUTOMOTIVEMECHANIC.org

150-49 CONNECTOR FACES

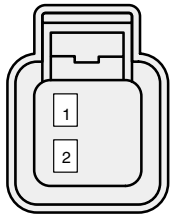
13A409



C405
RIGHT BACKUP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	–	NOT USED
3	140 (BK/PK)	Left Rear Backup Lamp Feed

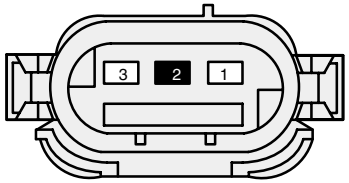
13A724



C407
LEFT REAR SPEAKER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	800 (GY/LB)	Speaker, Left Rear +
2	801 (TN/YE)	Speaker, Left Rear –

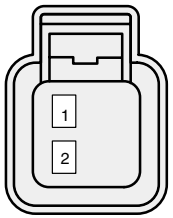
13A409



C406
RIGHT REAR TURN LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	–	NOT USED
3	5 (OG/LB)	Right Rear Turn Lamp Feed

13A724

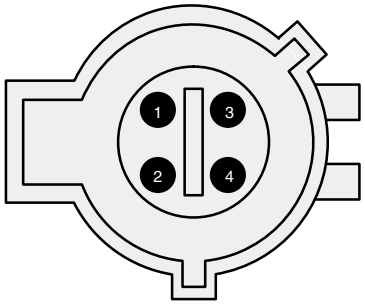


C408
RIGHT REAR SPEAKER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	802 (OG/RD)	Speaker, Right Rear +
2	803 (BN/BK)	Speaker, Right Rear –

www.AUTOMOTIVEMECHANIC.org

14405

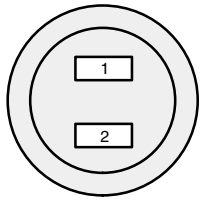


C409

SIEMANS INTERACTIVE AUTOMOTIVE DIAGNOSTIC INTERFACE SYSTEM (SIADIS)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3016 (LG/BK)	NOT USED
2	3018 (WH)	NOT USED
3	3017 (DG/WH)	NOT USED
4	3019 (GY/BK)	NOT USED

14405

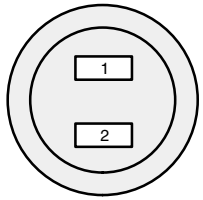


C411

LEFT LICENSE PLATE LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power

14405



C412

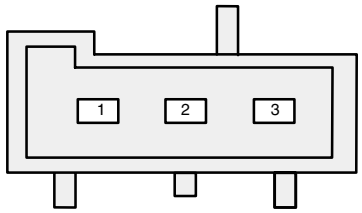
RIGHT LICENSE PLATE LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	14 (BN)	Power

www.AUTOMOTIVEMECHANIC.org

150-51 CONNECTOR FACES

14631

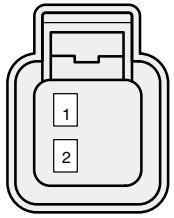


C500

LEFT EXTERIOR REAR VIEW MIRROR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	540 (RD)	Right/Left Mirror Movement
2	541 (DB)	Up/Down Mirror Movement
3	542 (YE)	Mirror Motor, Feed

19A044/14631



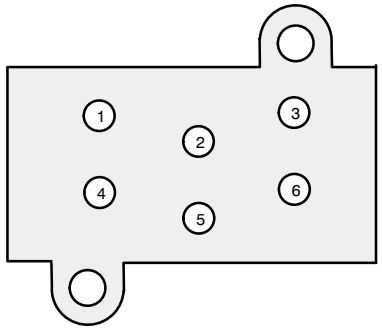
C501

LEFT FRONT SPEAKER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	804 (OG/LG)	Speaker, Left Front +
2	813 (LB/WH)	Speaker, Left Front –

www.AUTOMOTIVEMECHANIC.org

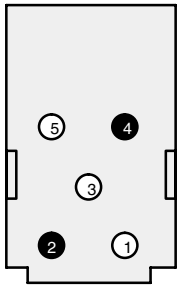
14631



C502
MASTER WINDOW CONTROL SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	992 (WH/BK)	Master Window Adjust Switch, Feed, Up
2	400 (LB/BK)	Accessory Relay, Switched Power, Output
3	313 (WH/YE)	Window Switch, Feed, Right Front, Up
4	991 (TN/LB)	Master Window Adjust Switch, Feed, Down
5	57 (BK)	Ground
6	314 (TN/LB)	Window Switch, Feed, Right Front, Down

14631



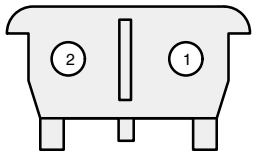
C503
LEFT DOOR LOCK SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	120 (PK/LG)	Door Unlock Relay, Control
2	–	NOT USED
3	57 (BK)	Ground
4	–	NOT USED
5	119 (PK/YE)	Door Lock Relay, Control

www.AUTOMOTIVE MECHANIC.ORG

150-53 CONNECTOR FACES

14631

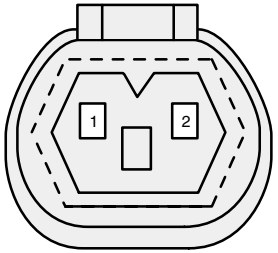


C504

LEFT POWER WINDOW MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	992 (WH/BK)	Master Window Adjust Switch, Feed, Up
2	903 (RD)	Window Motor, Feed, Down

14631



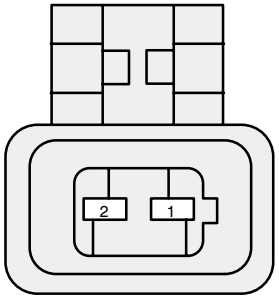
C505

LEFT DOOR LOCK ACTUATOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	163 (RD/OG)	Door Unlock, Output
2	117 (PK/BK)	Door Lock. Output

www.AUTOMOTIVEMECHANIC.org

19A044/14631

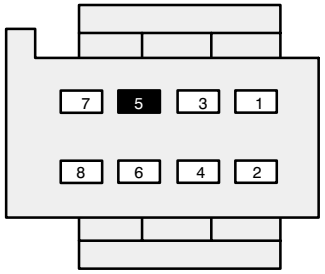


C506

LEFT DOOR AJAR SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	765 (YE/BK)	Door Ajar Switch, Left
2	57 (BK)	Ground

14631



C509

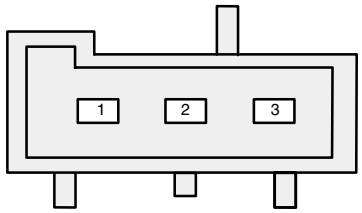
EXTERIOR REAR VIEW MIRROR SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	540 (RD)	Left Left/Right Motor Input/Output
2	544 (VT)	Right Up/Down Motor Input/Output
3	543 (DG)	Right Left/Right Motor Input/Output
4	541 (DB)	Left Up/Down Motor Input/Output
5	–	NOT USED
6	542 (YE)	Left Exterior Rear View Mirror Input/Output
	542 (YE)	Right Exterior Rear View Mirror Input/Output
7	956 (OG/LG)	Power (Hot At All Times)
8	57 (BK)	Ground

www.AUTOMOTIVE MECHANIC.ORG

150-55 CONNECTOR FACES

14630

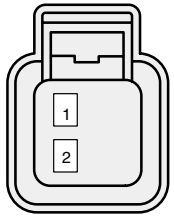


C600

RIGHT EXTERIOR REAR VIEW MIRROR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	543 (DG)	Right/Left Mirror Movement
2	544 (VT)	Up/Down Mirror Movement
3	542 (YE)	Mirror Motor, Feed

19A044/14630



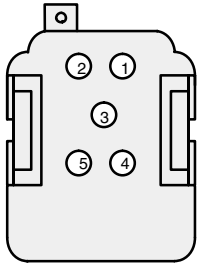
C601

RIGHT FRONT SPEAKER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	805 (WH/LG)	Speaker, Right Front +
2	813 (DG/OG)	Speaker, Right Front −

www.AUTOMOTIVEMECHANIC.org

14630

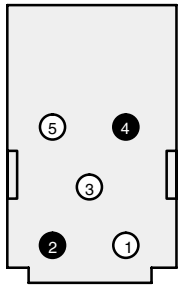


C602

RIGHT WINDOW SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	333 (YE/RD)	Down Window Switch Feed
2	314 (TN/LB)	Right Window Feed Switch, Down
3	400 (LB/BK)	Accessory Relay, Switched Power, Output
4	313 (WH/YE)	Right Window Feed Switch, Up
5	334 (RD/YE)	Up Window Switch Feed

14630



C603

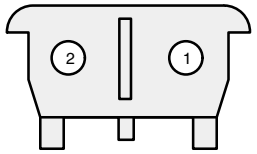
RIGHT DOOR LOCK SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	120 (PK/LG)	Door Unlock Relay, Control
2	–	NOT USED
3	57 (BK)	Ground
4	–	NOT USED
5	119 (PK/YE)	Door Lock Relay, Control

www.AUTOMOTIVEMECHANIC.org

150-57 CONNECTOR FACES

14630

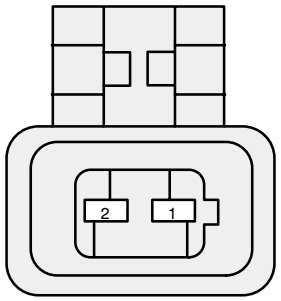


C604

RIGHT POWER WINDOW MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	991 (TN/LB)	Master Window Adjust Switch, Feed, Up
2	903 (RD)	Window Motor, Feed, Down

19A041/14630



C606

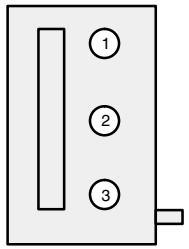
RIGHT DOOR AJAR SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	765 (YE/BK)	Right Door Ajar Switch
2	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.org

EXCEPT POSTAL

13A724



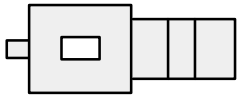
C900

OUTSIDE CARGO/HIGH MOUNTED STOPLAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	55 (BK/PK)	Cargo Lamp, Output
2	569 (DG)	Brake Pedal Position Switch, to Stoplamps
3	57 (BK)	Ground

EXCEPT POSTAL

13A724



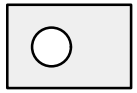
C901

INTERIOR/MAP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	705 (LG/OG)	Battery Saver Relay, Switched Power

POSTAL

13A724



C902

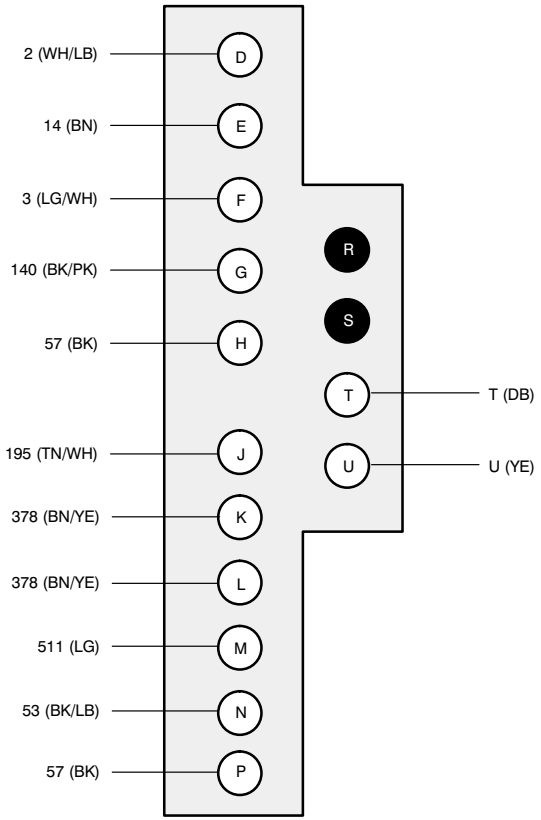
INTERIOR/MAP LAMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	53 (BK/LB)	Interior Lamp Relay, Switched Power, Output

www.AUTOMOTIVEMECHANIC.org

150-59 CONNECTOR FACES

POSTAL

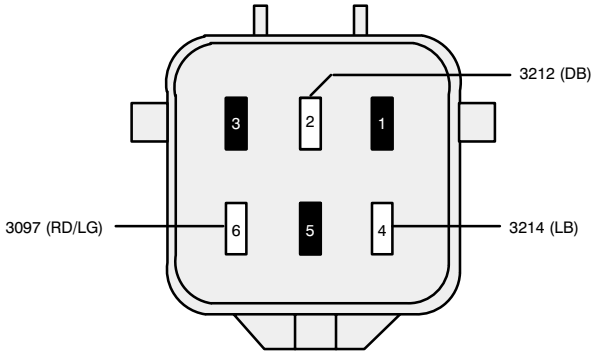


C903

GRUMMAN HEADLINER HARNESS

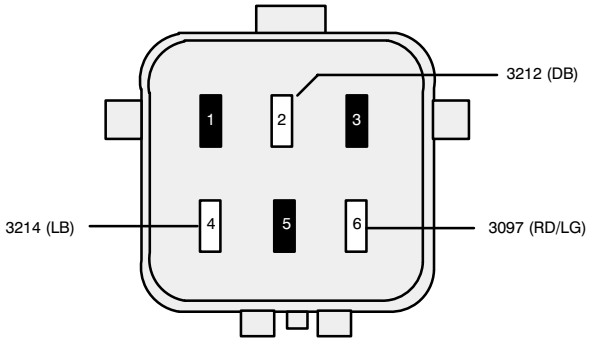
www.AUTOMOTIVEMECHANIC.ORG

10B694



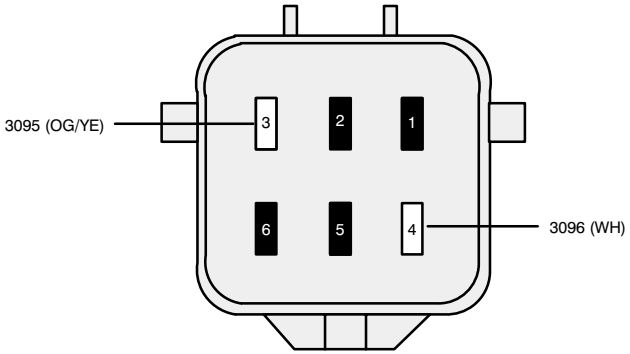
C1747M

14A280-N



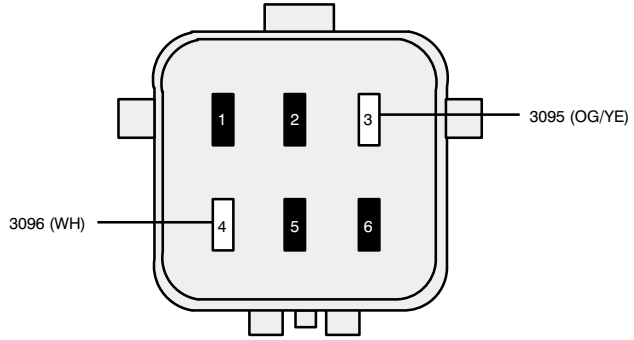
C1747F

10B694



C1748M

14A280-M

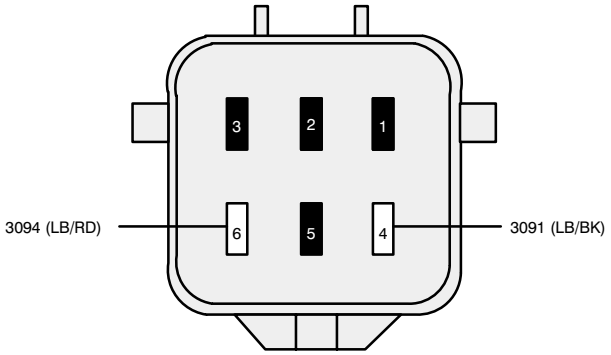


C1748F

www.AUTOMOTIVE MECHANIC.ORG

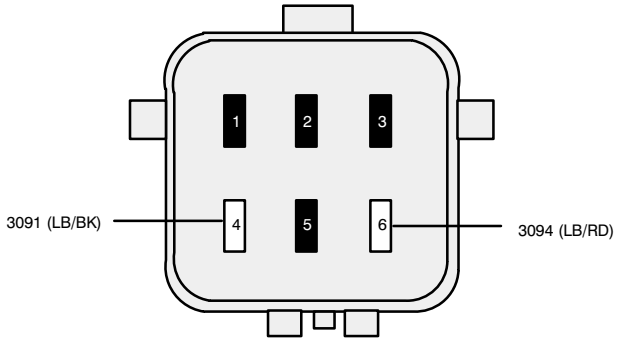
150-61 CONNECTOR FACES

10B694



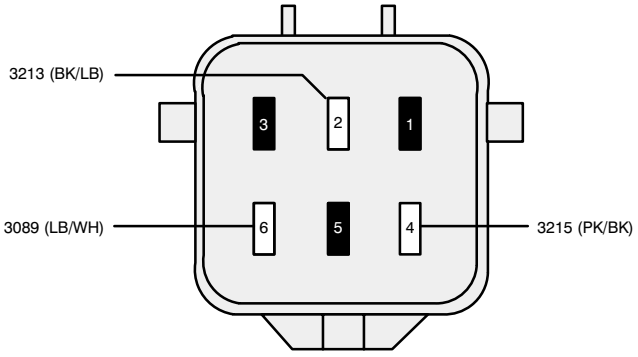
C1749M

14A280-L



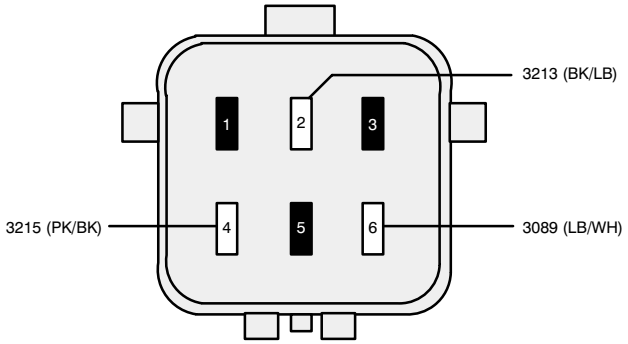
C1749F

10B694



C1750M

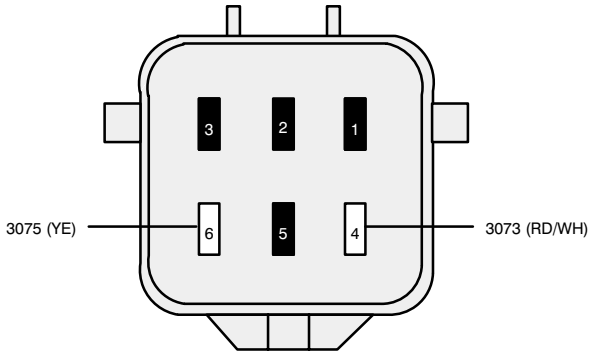
14A280-A



C1750F

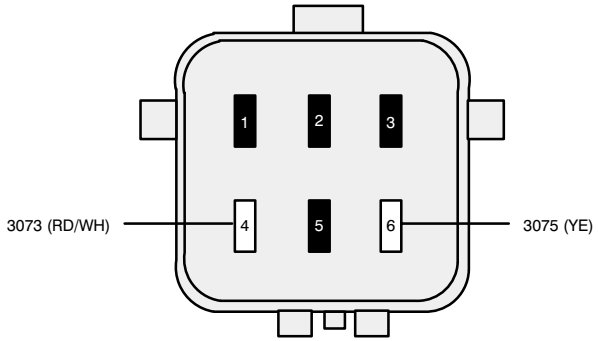
www.AUTOMOTIVEMECHANIC.ORG

10B694



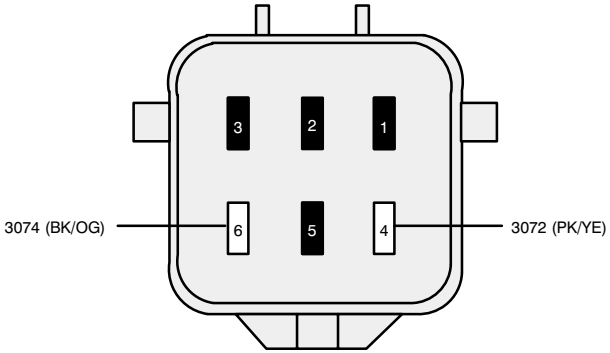
C1751M

14A280-B



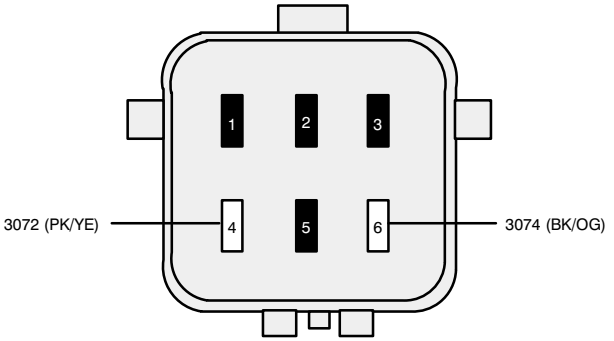
C1751F

10B694



C1752M

14A280-C

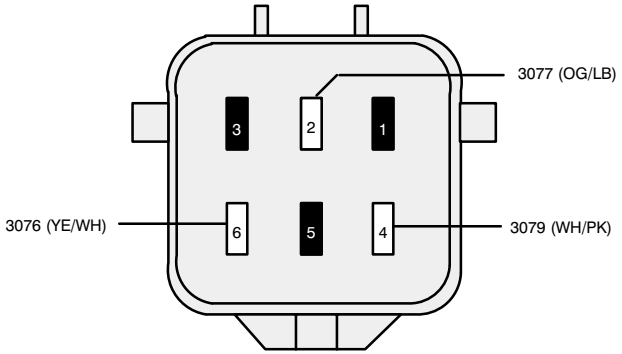


C1752F

www.AUTOMOTIVEMECHANIC.org

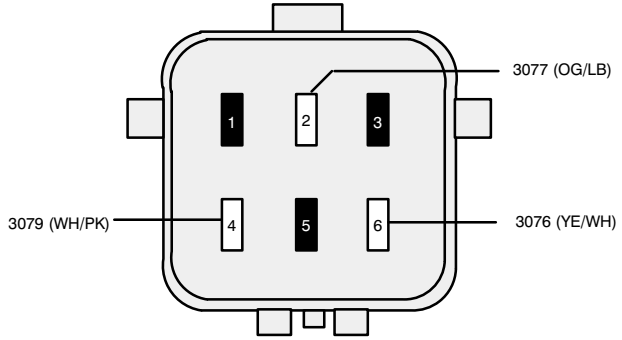
150-63 CONNECTOR FACES

10B694



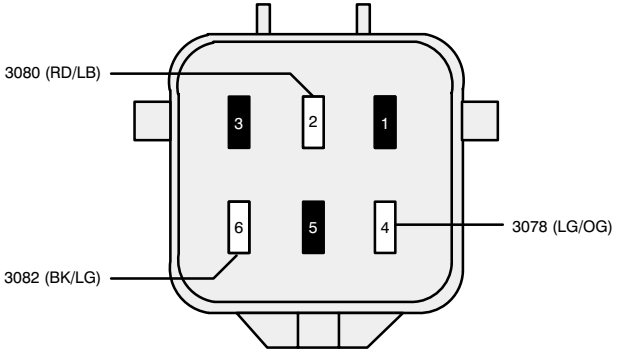
C1753M

14A280-D



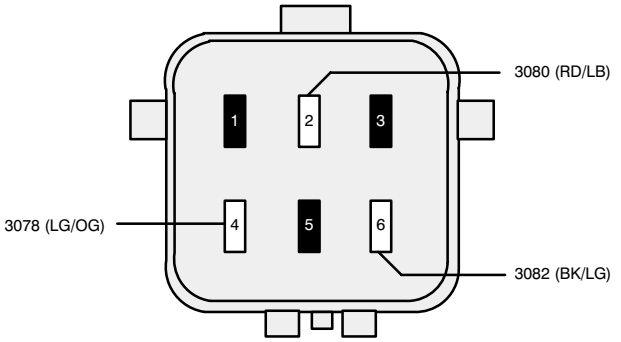
C1753F

10B694



C1754M

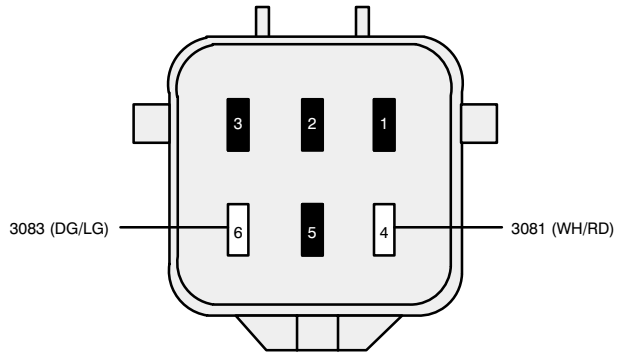
14A280-E



C1754F

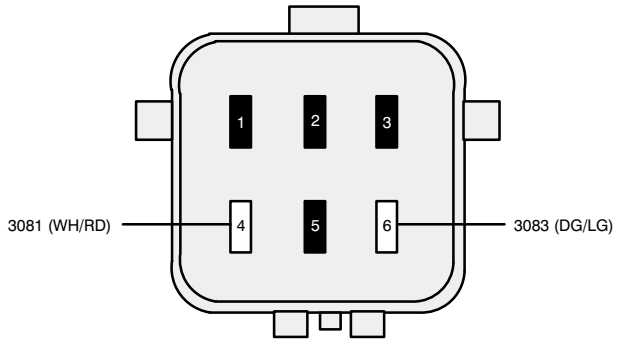
www.AUTOMOTIVEMECHANIC.org

10B694



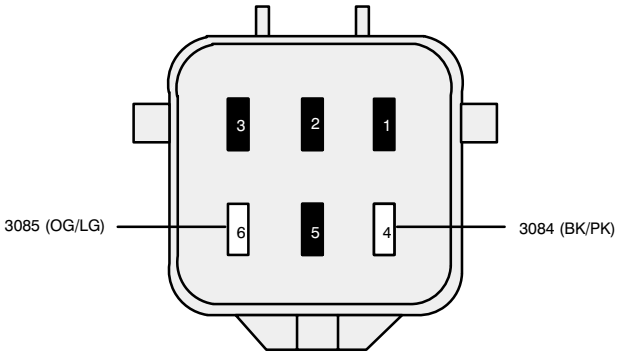
C1755M

14A280-F



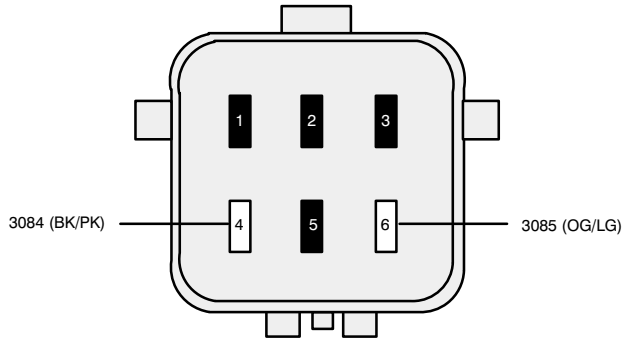
C1755F

10B694



C1756M

14A280-G

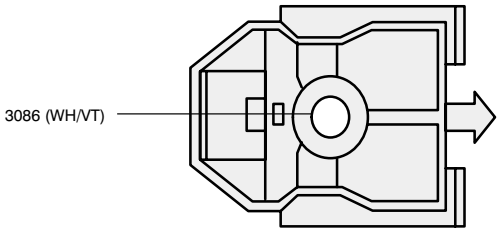


C1756F

www.AUTOMOTIVE MECHANIC.ORG

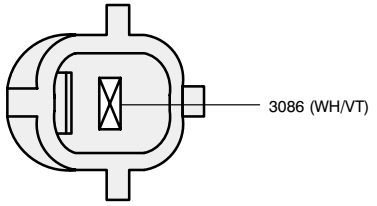
150-65 CONNECTOR FACES

14A280-H



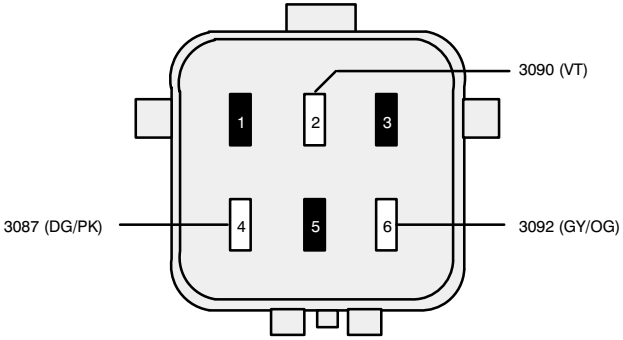
C1757F

10B694



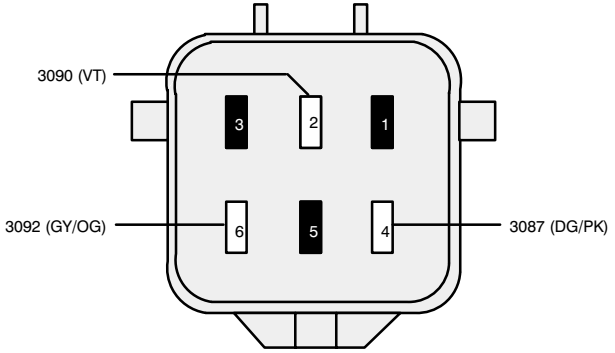
C1757M

14A280-J



C1758F

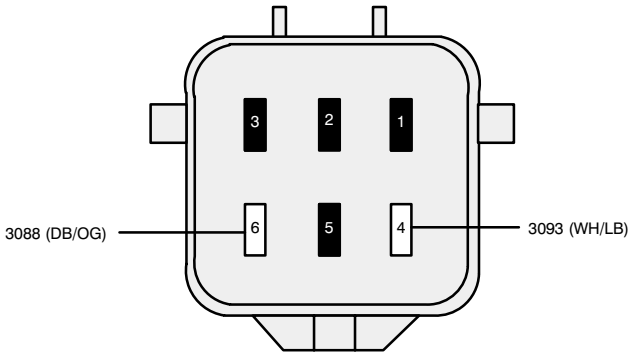
10B694



C1758M

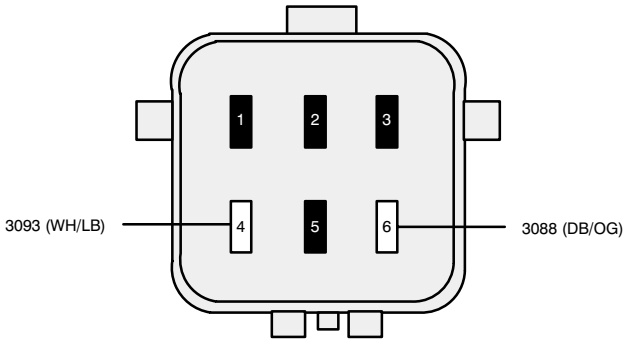
www.AUTOMOTIVEMECHANIC.org

10B694



C1759M

14A280-K

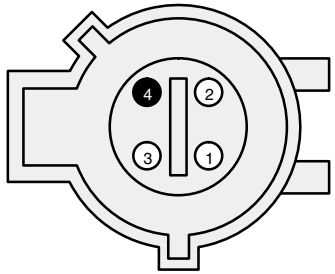


C1759F

www.AUTOMOTIVE MECHANIC.ORG

150-67 CONNECTOR FACES

10B691



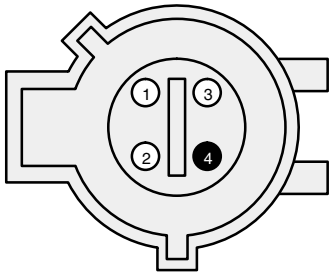
C1801

RECIRCULATING FAN

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	3396 (YE/LG)	Relay Signal Feed
3	3605 (DB/WH)	Lube Pressure Switch
4	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

10B691

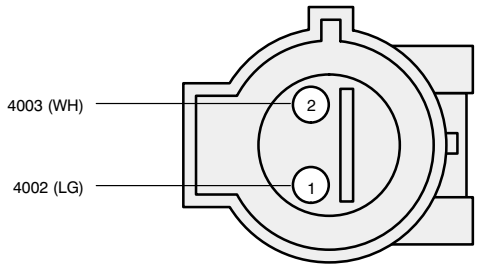


C1802

FLOW-THROUGH FAN

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	3395 (OG/LB)	Power Feed, Signal
3	3851 (YE/RD)	Feedback, Return
4	–	NOT USED

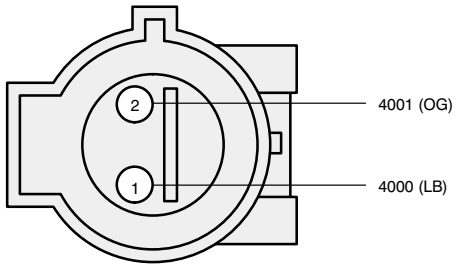
10B691



C1804

BATTERY TEMPERATURE SENSOR #2 (IOM)

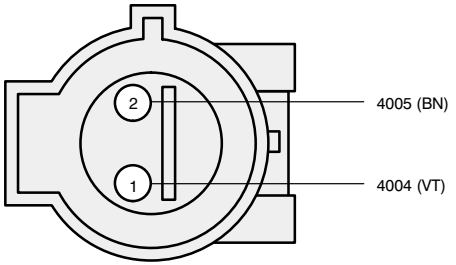
10B691



C1803

BATTERY TEMPERATURE SENSOR #1 (IOM)

10B691

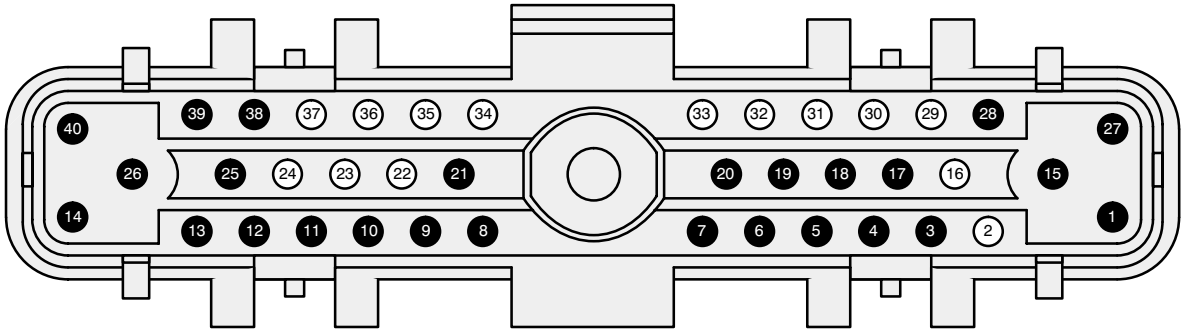


C1805

BATTERY TEMPERATURE SENSOR #3 (IOM)

www.AUTOMOTIVE MECHANIC.ORG

150-69 CONNECTOR FACES



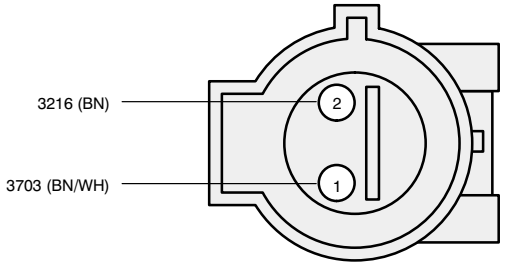
C1810

INDEPENDENT OBSERVER MODULE (IOM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	21	–	NOT USED
2	57 (BK)	Ground	22	4001 (OG)	Battery Temperature Sensor #1 (IOM) Return
3	–	NOT USED	23	4003 (WH)	Battery Temperature Sensor #2 (IOM) Return
4	–	NOT USED	24	4005 (BN)	Battery Temperature Sensor #3 (IOM) Return
5	–	NOT USED	25	–	NOT USED
6	–	NOT USED	26	–	NOT USED
7	–	NOT USED	27	–	NOT USED
8	–	NOT USED	28	–	NOT USED
9	–	NOT USED	29	787 (PK/BK)	Power Hot at all Times
10	–	NOT USED	30	3404 (YE)	Charge Cord Plugged in
11	–	NOT USED	31	4007 (YE/LG)	BCM to IOM Diagnostic Input
12	–	NOT USED	32	4008 (RD/BK)	IOM to BCM Diagnostic Output
13	–	NOT USED	33	3984 (RD)	Charge Pilot Interrupt In
14	–	NOT USED	34	4009 (LB/RD)	Charge Pilot Interrupt Out
15	–	NOT USED	35	4000 (LB)	Battery Temperature Sensor #1 (IOM) Input
16	570 (BK/WH)	Ground	36	4002 (LG)	Battery Temperature Sensor #2 (IOM) Input
17	–	NOT USED	37	4004 (VT)	Battery Temperature Sensor #3 (IOM) Input
18	–	NOT USED	38	–	NOT USED
19	–	NOT USED	39	–	NOT USED
20	–	NOT USED	40	–	NOT USED

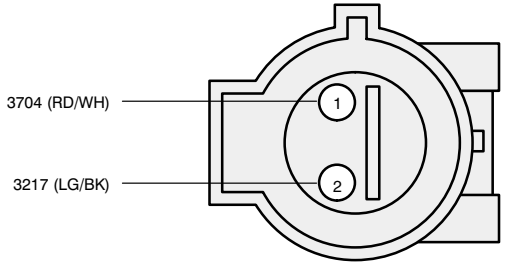
www.AUTOMOTIVEMECHANIC.org

10B691



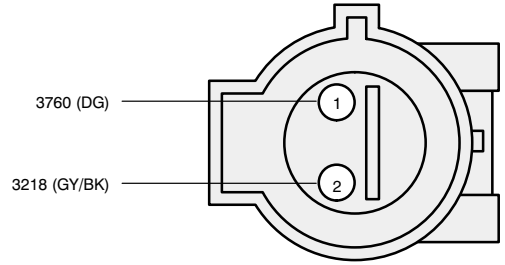
C1813
BATTERY TEMPERATURE SENSOR #1

10B691



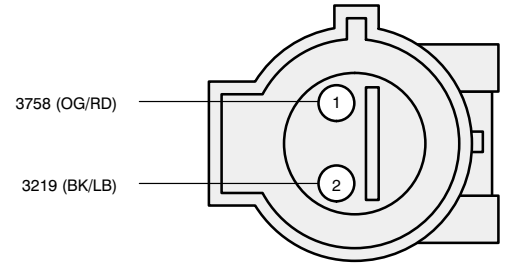
C1815
BATTERY TEMPERATURE SENSOR #3

10B691



C1814
BATTERY TEMPERATURE SENSOR #2

10B691

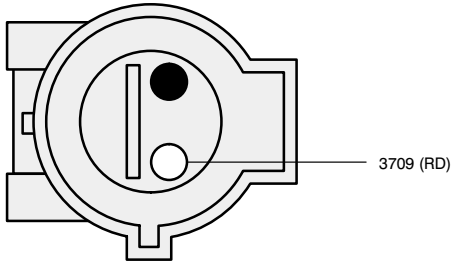


C1816
BATTERY TEMPERATURE SENSOR #4

www.AUTOMOTIVE MECHANIC.ORG

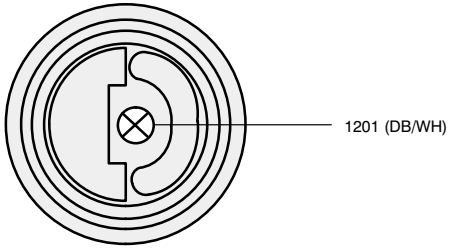
150-71 CONNECTOR FACES

10B700



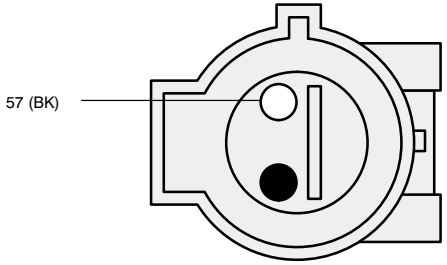
C1859
UPPER BATTERY HEATER (POWER)

10B700



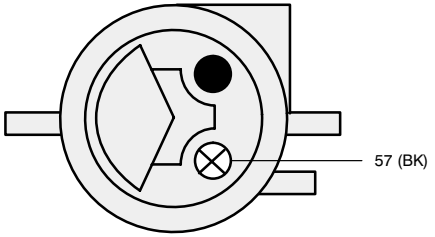
C1862
LOWER BATTERY HEATER (POWER)

10B700



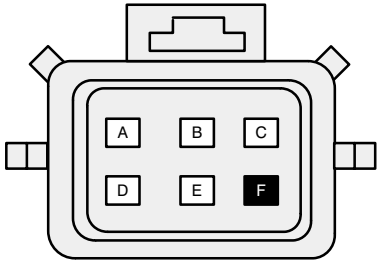
C1861
UPPER BATTERY HEATER (GROUND)

10B700



C1863
LOWER BATTERY HEATER (GROUND)

www.AUTOMOTIVEMECHANIC.org



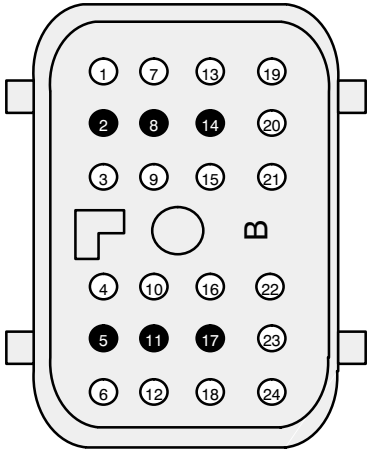
C1864
CONTACTOR BOX

PIN	CIRCUIT	CIRCUIT FUNCTION
A	1201 (DB/WH)	Lower Battery Heater Feed
B	57 (BK)	Ground
C	3709 (RD)	Upper Battery Heater Feed
D	1161 (DG/OG)	Batter Heater Present
E	1161 (DG/OG)	Battery Heater Present
F	–	NOT USED

www.AUTOMOTIVEMECHANIC.ORG

150-73 CONNECTOR FACES

LEAD ACID



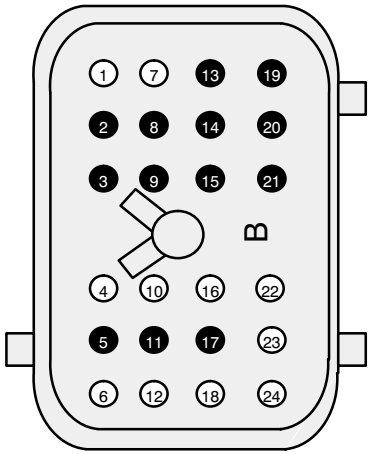
C1865

BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	3215 (PK/BK)	Battery Control Module (BCM) Traction Battery Negative	13	3089 (LB/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 0
2	–	NOT USED	14	–	NOT USED
3	3077 (OG/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 6	15	3075 (YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 4
4	3078 (LB/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 7	16	3080 (RD/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 9
5	–	NOT USED	17	–	NOT USED
6	3086 (WH/VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 15	18	3084 (BK/PK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 13
7	3213 (BK/LB)	Battery Module (BCM) Leakage Detect Low	19	3072 (PK/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 1
8	–	NOT USED	20	3073 (RD/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 2
9	3076 (YE/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 5	21	3074 (BK/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 3
10	3079 (WH/PK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 8	22	3081 (WH/RD)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 10
11	–	NOT USED	23	3082 (BK/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 11
12	3085 (OG/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 14	24	3083 (YE/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 12

www.AUTOMOTIVE MECHANIC.ORG

NiMH



C1865

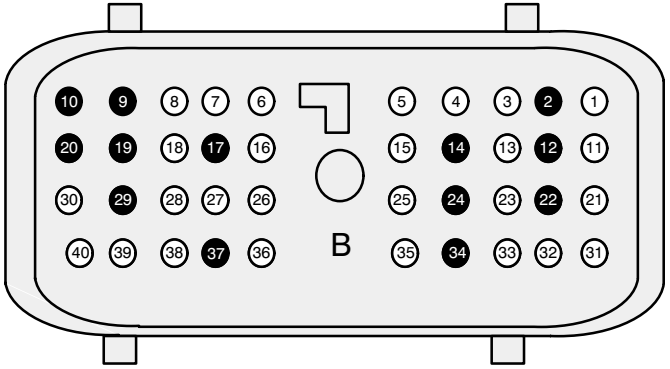
BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	3215 (PK/BK)	Battery Control Module (BCM) Traction Battery Negative	13	–	NOT USED
			14	–	NOT USED
2	–	NOT USED	15	–	NOT USED
3	–	NOT USED	16	3073 (RD/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 2
4	3089 (LB/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 0	17	–	NOT USED
5	–	NOT USED	18	3077 (OG/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 6
6	3079 (WH/PK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 8	19	–	NOT USED
7	3213 (BK/LB)	Battery Module (BCM) Leakage Detect Low	20	–	NOT USED
			21	–	NOT USED
8	–	NOT USED	22	3074 (BK/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 3
9	–	NOT USED			
10	3072 (PK/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 1	23	3075 (YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 4
11	–	NOT USED	24	3076 (YE/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 5
12	3078 (LB/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 7			

www.AUTOMOTIVEMECHANIC.org

150-75 CONNECTOR FACES

LEAD ACID



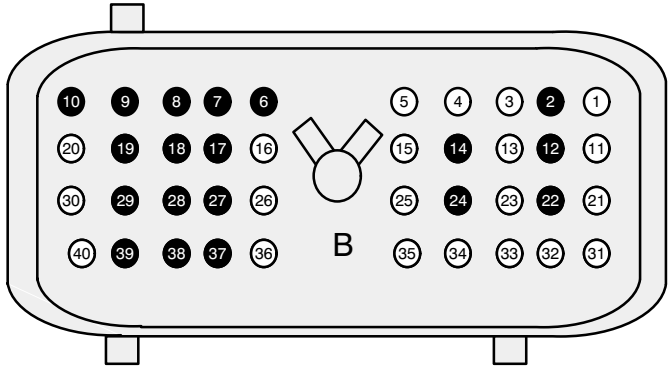
C1866

BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3087 (DG/VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 16
2	–	NOT USED
3	3096 (WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 24
4	3097 (RD/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 25
5	3098 (RD/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 26
6	3205 (OG/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 33
7	3206 (LG/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 34
8	3207 (VT/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 35
9	–	NOT USED
10	–	NOT USED
11	3088 (DB/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 17
12	–	NOT USED
13	3095 (OG/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 23
14	–	NOT USED
15	3099 (BN)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 27
16	3204 (LG/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 32
17	–	NOT USED
18	3208 (GY/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 36
19	–	NOT USED
20	–	NOT USED
21	3090 (VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 18
22	–	NOT USED
23	3094 (LB/RD)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 22
24	–	NOT USED
25	3200 (RD/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 28
26	3203 (LG/RD)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 31
27	–	NOT USED
28	3209 (WH/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 37
29	–	NOT USED
30	3214 (LB)	Battery Control Module (BCM) Traction Battery Positive
31	3091 (LB/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 19
32	3092 (GY/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 20
33	3093 (WH/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 21
34	–	NOT USED
35	3201 (LG/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 29
36	3202 (TN/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 30
37	–	NOT USED
38	3210 (LG/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 38
39	3211 (WH/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 39
40	3212 (DB)	Battery Control Module (BCM) Leakage Detect High

www.AUTOMOTIVEMECHANIC.org

NiMH



C1866

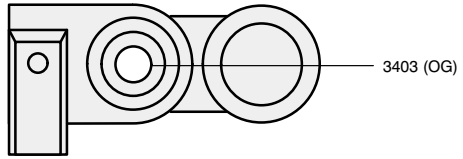
BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3080 (RD/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 9
2	–	NOT USED
3	3088 (DB/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 17
4	3090 (VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 18
5	3091 (LB/BK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 19
6	–	NOT USED
7	–	NOT USED
8	–	NOT USED
9	–	NOT USED
10	–	NOT USED
11	3081 (WH/RD)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 10
12	–	NOT USED
13	3087 (DG/VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 16
14	–	NOT USED
15	3092 (GY/OG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 20
16	3097 (RD/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 25
17	–	NOT USED
18	–	NOT USED
19	–	NOT USED
20	–	NOT USED
21	3082 (BK/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 11
22	–	NOT USED
23	3086 (WH/VT)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 15
24	–	NOT USED
25	3093 (WH/LB)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 21
26	3096 (WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 24
27	–	NOT USED
28	–	NOT USED
29	–	NOT USED
30	3214 (LB)	Battery Control Module (BCM) Traction Battery Positive
31	3083 (YE/WH)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 12
32	3084 (BK/PK)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 13
33	3085 (OG/LG)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 14
34	–	NOT USED
35	3094 (LB/RD)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 22
36	3095 (OG/YE)	Battery Control Module (BCM) – Voltage Sense Lead (VSL) 23
37	–	NOT USED
38	–	NOT USED
39	–	NOT USED
40	3212 (DB)	Battery Control Module (BCM) Leakage Detect High

www.AUTOMOTIVEMECHANIC.org

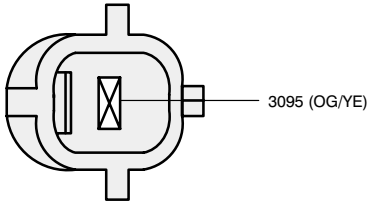
150-77 CONNECTOR FACES

14A280-P



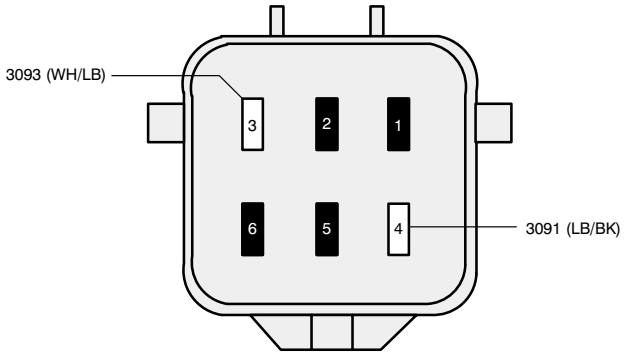
C1867F

10B694



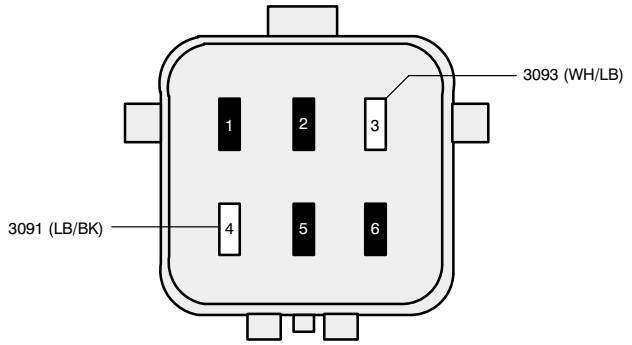
C1867M

10B694



C1868M

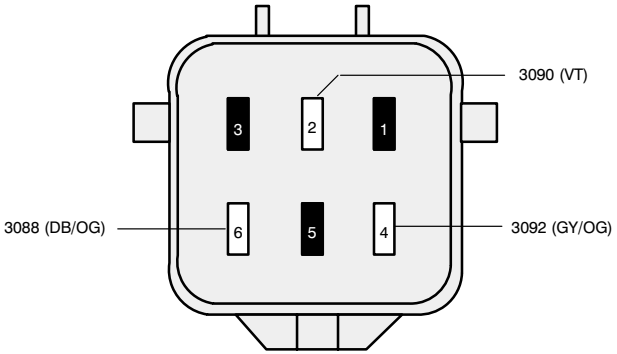
14A280-M



C1868F

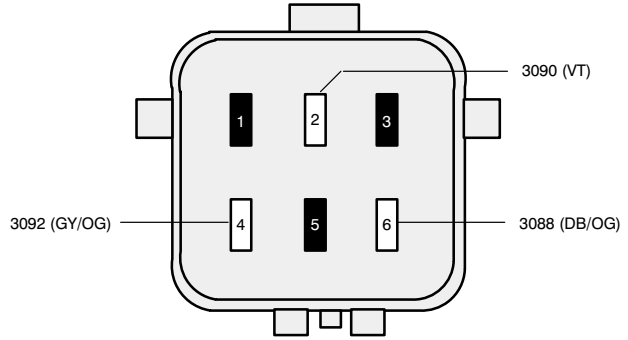
www.AUTOMOTIVEMECHANIC.ORG

10B694



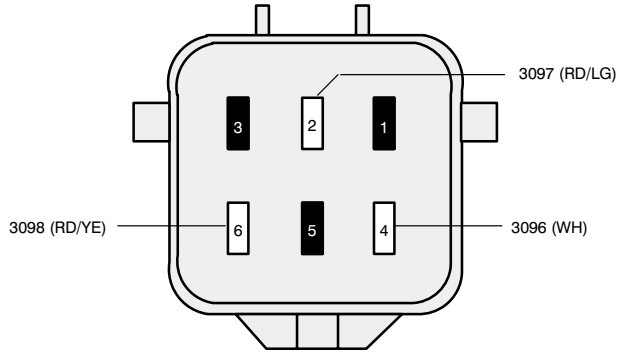
C1869M

14A280-F



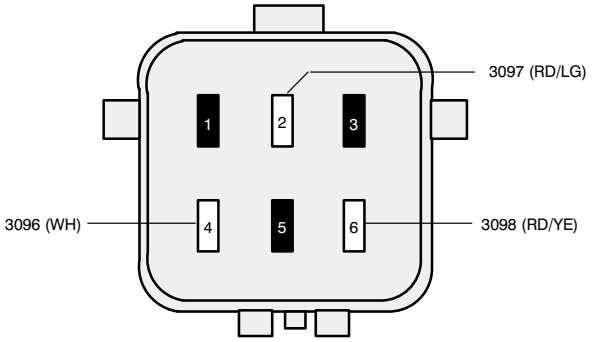
C1869F

10B694



C1870M

14A280-N

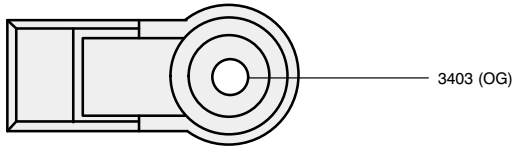


C1870F

www.AUTOMOTIVE MECHANIC.ORG

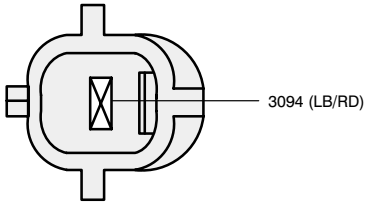
150-79 CONNECTOR FACES

14A280-E



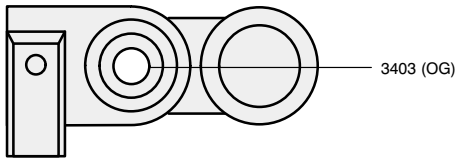
C1871F

10B694



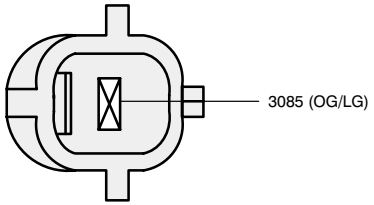
C1871M

14A280-K



C1872F

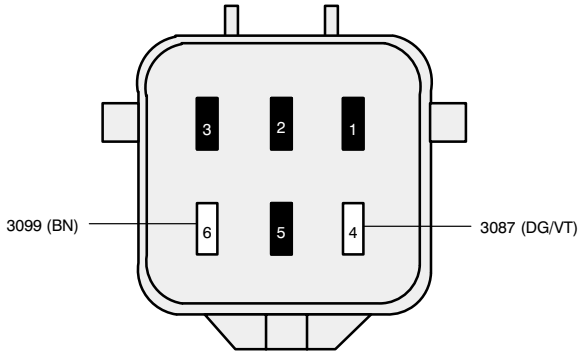
10B694



C1872M

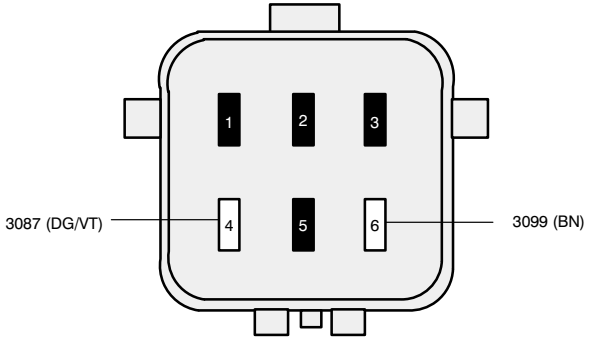
www.AUTOMOTIVEMECHANIC.org

10B694



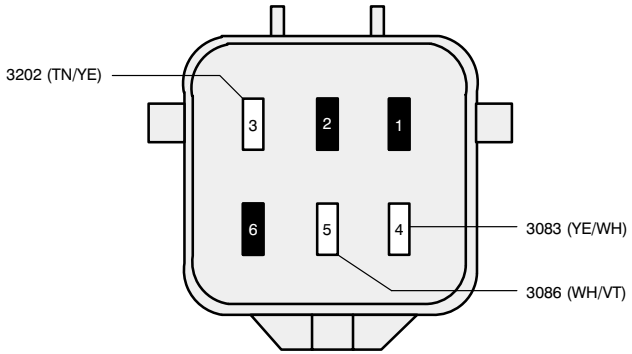
C1873M

14A280-L



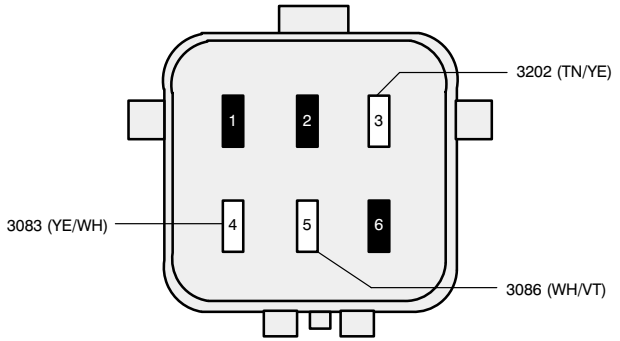
C1873F

10B694



C1874M

14A280-J

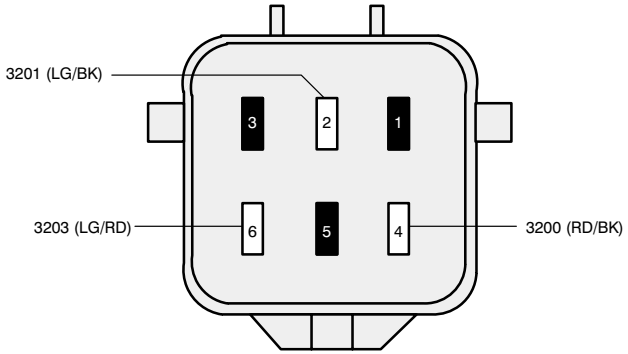


C1874F

www.AUTOMOTIVEMECHANIC.org

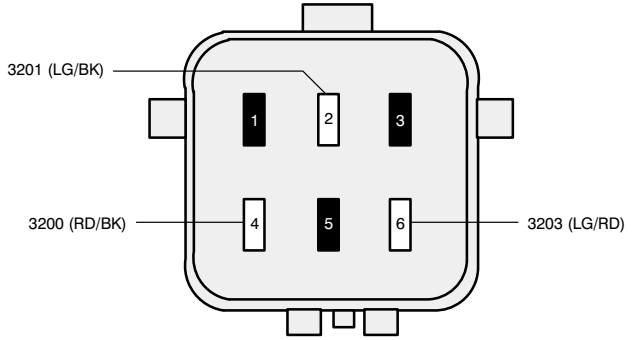
150-81 CONNECTOR FACES

10B694



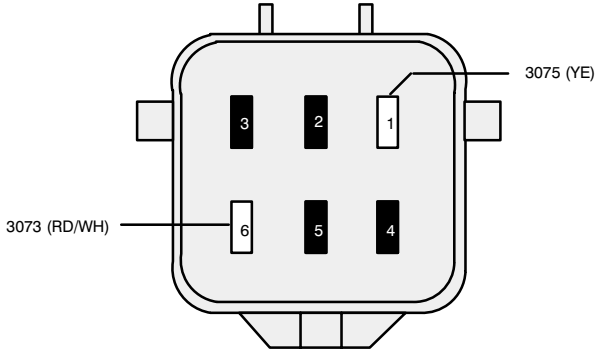
C1875M

14A280-S



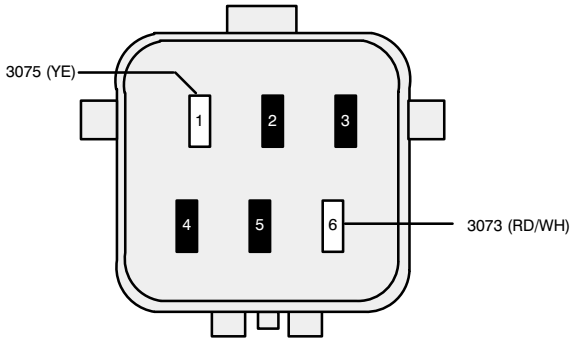
C1875F

10B694



C1876M

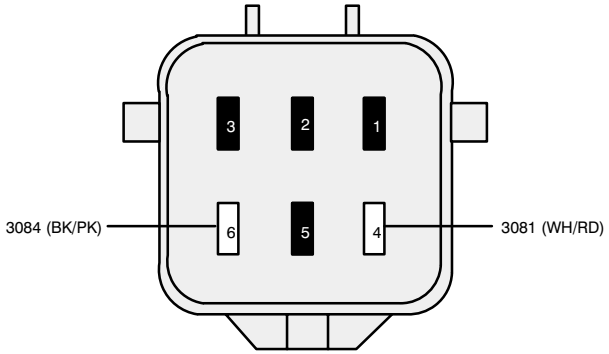
14A280-B



C1876F

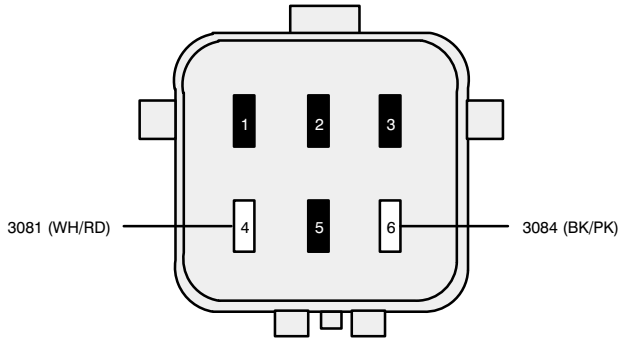
www.AUTOMOTIVEMECHANIC.org

10B694



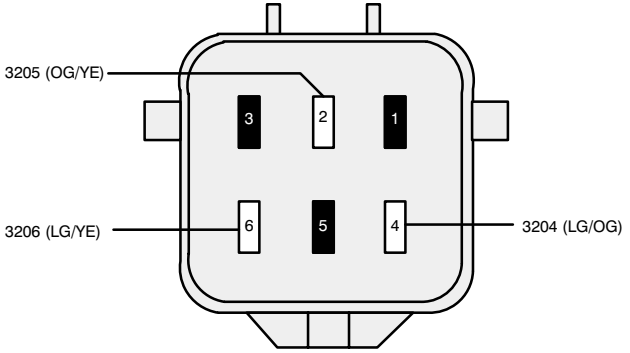
C1877M

14A280-H



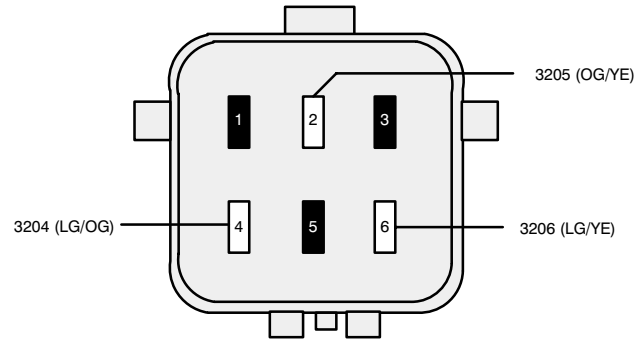
C1877F

10B694



C1878M

14A280-T

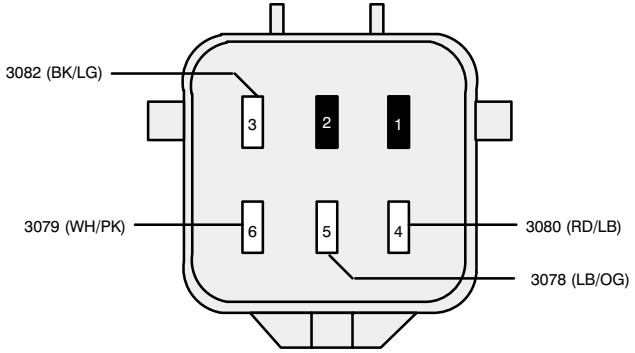


C1878F

www.AUTOMOTIVEMECHANIC.org

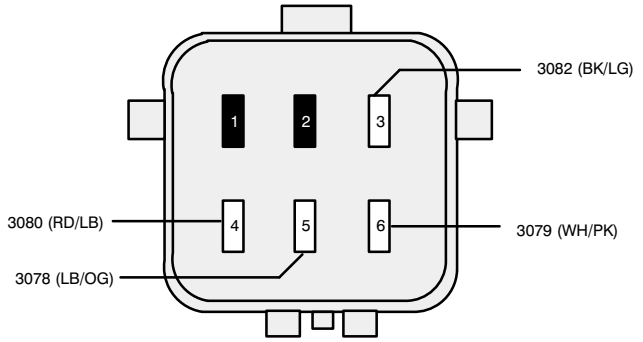
150-83 CONNECTOR FACES

10B694



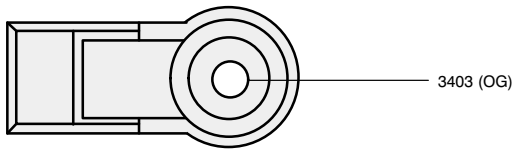
C1879M

14A280-G



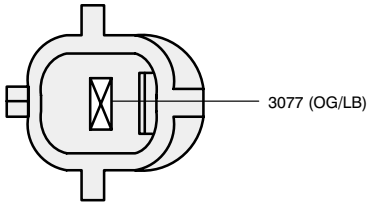
C1879F

14A280-D



C1880F

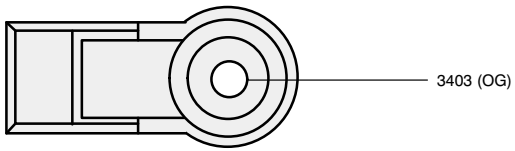
10B694



C1880M

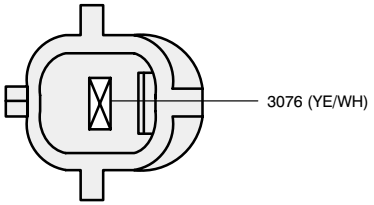
www.AUTOMOTIVEMECHANIC.org

14A280-C



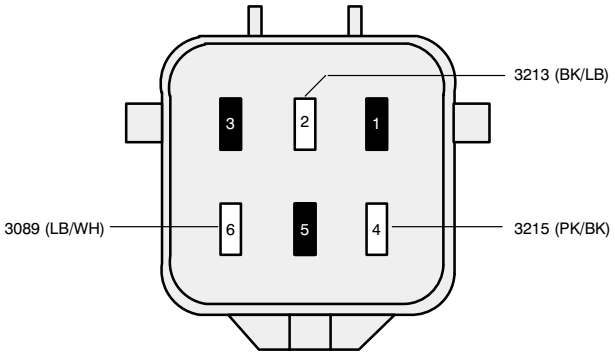
C1881F

10B694



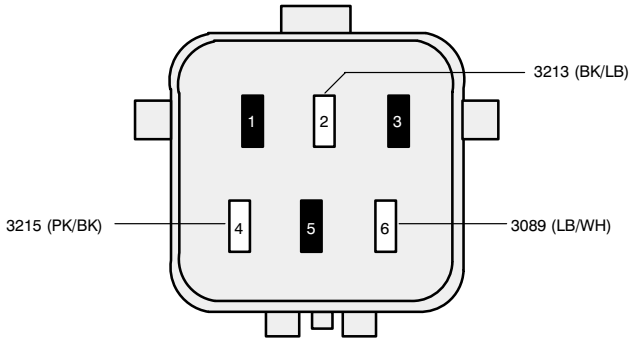
C1881M

10B694



C1882M

14A280-R

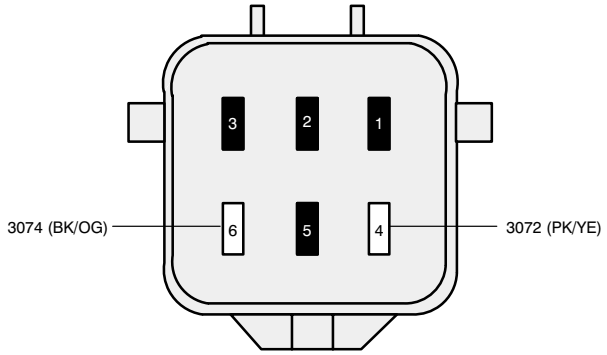


C1882F

www.AUTOMOTIVEMECHANIC.org

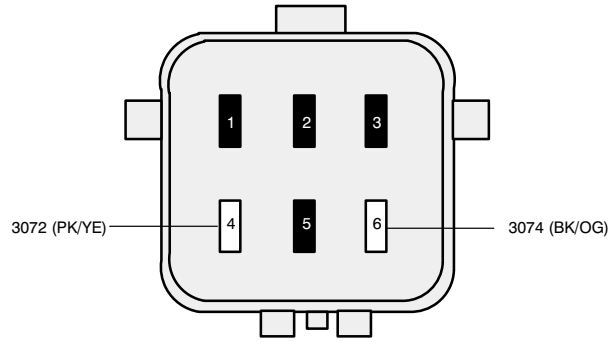
150-85 CONNECTOR FACES

10B694



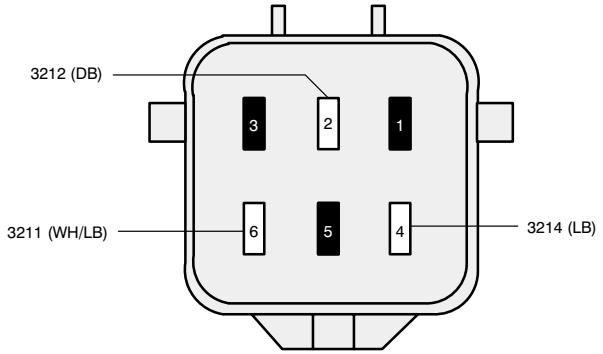
C1884M

14A280-A



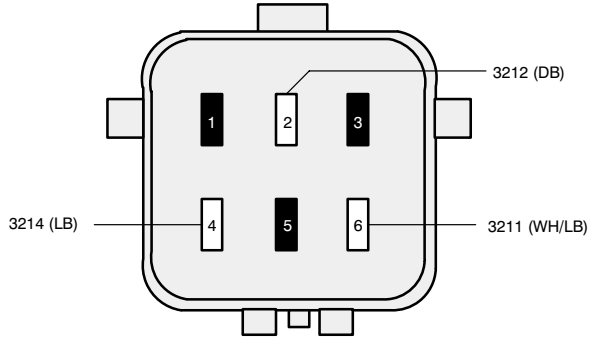
C1884F

10B694



C1885M

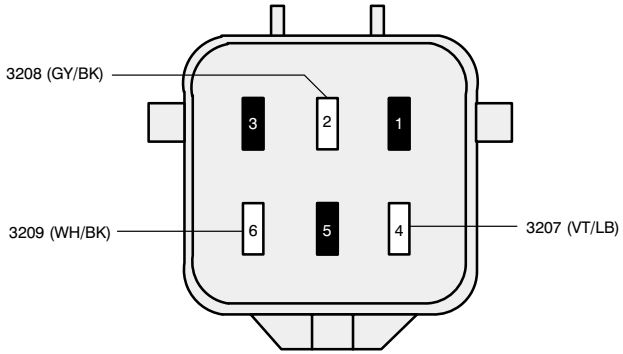
14A280-W



C1885F

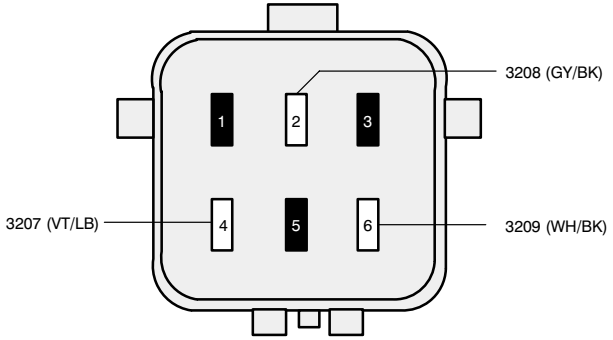
www.AUTOMOTIVEMECHANIC.org

10B694



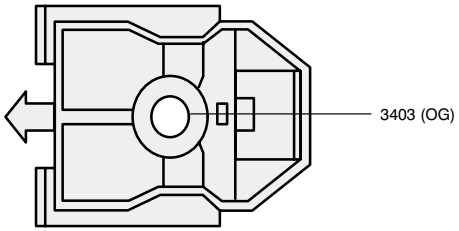
C1886M

14A280-U



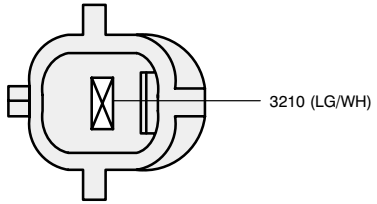
C1886F

14A280-V



C1887F

10B694

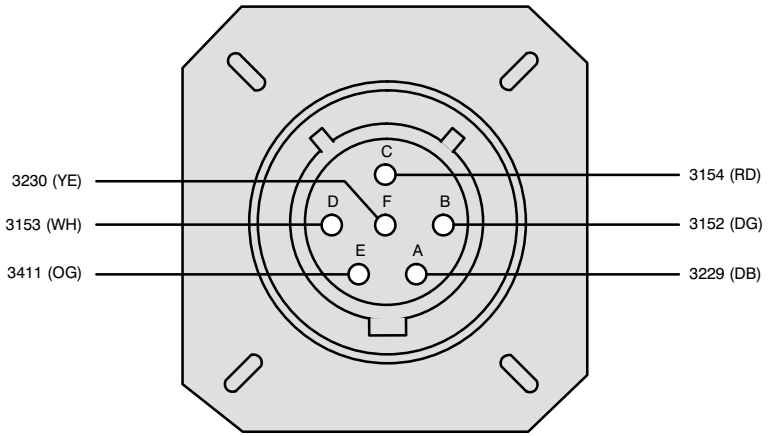


C1887M

www.AUTOMOTIVEMECHANIC.org

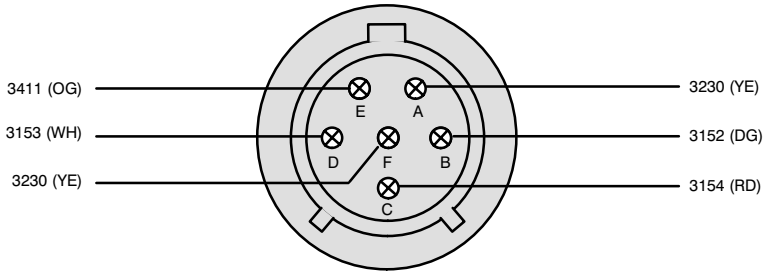
150-87 CONNECTOR FACES

19E822



C1902F

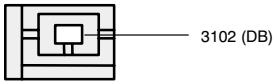
14B306



C1902M

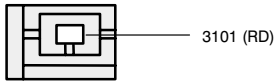
www.AUTOMOTIVEMECHANIC.org

14B353



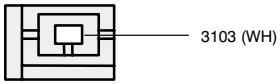
C1903
POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE

14B353



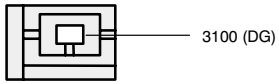
C1905
POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE

14B353



C1904
POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE

14B353

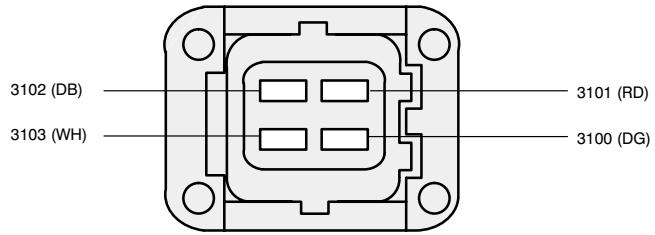


C1906
POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE

www.AUTOMOTIVE MECHANIC.ORG

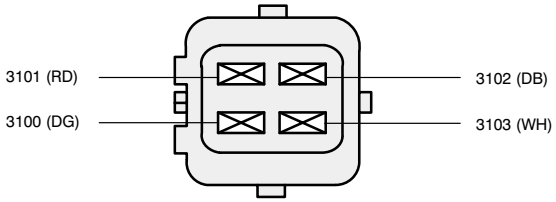
150-89 CONNECTOR FACES

14B353

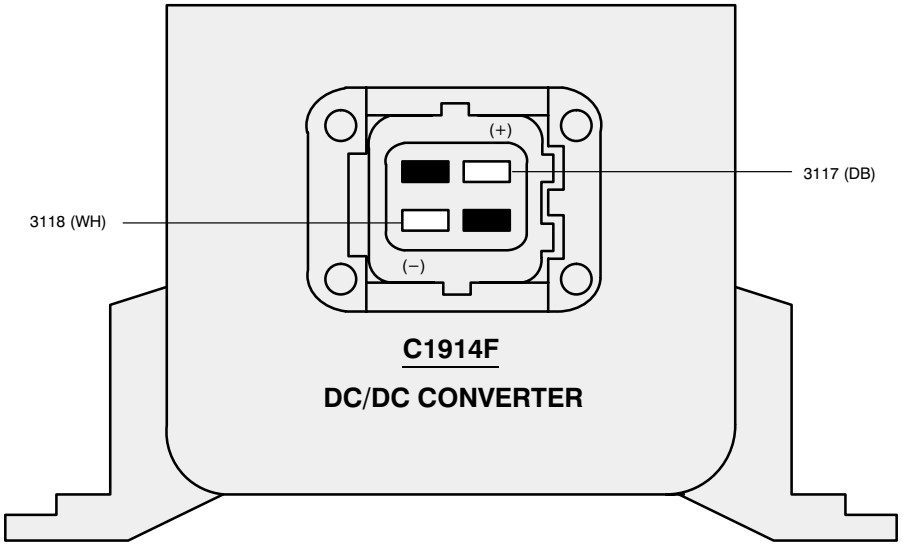


C1912F

14B324



C1912M

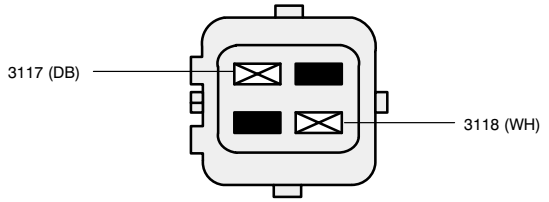


C1914F

DC/DC CONVERTER

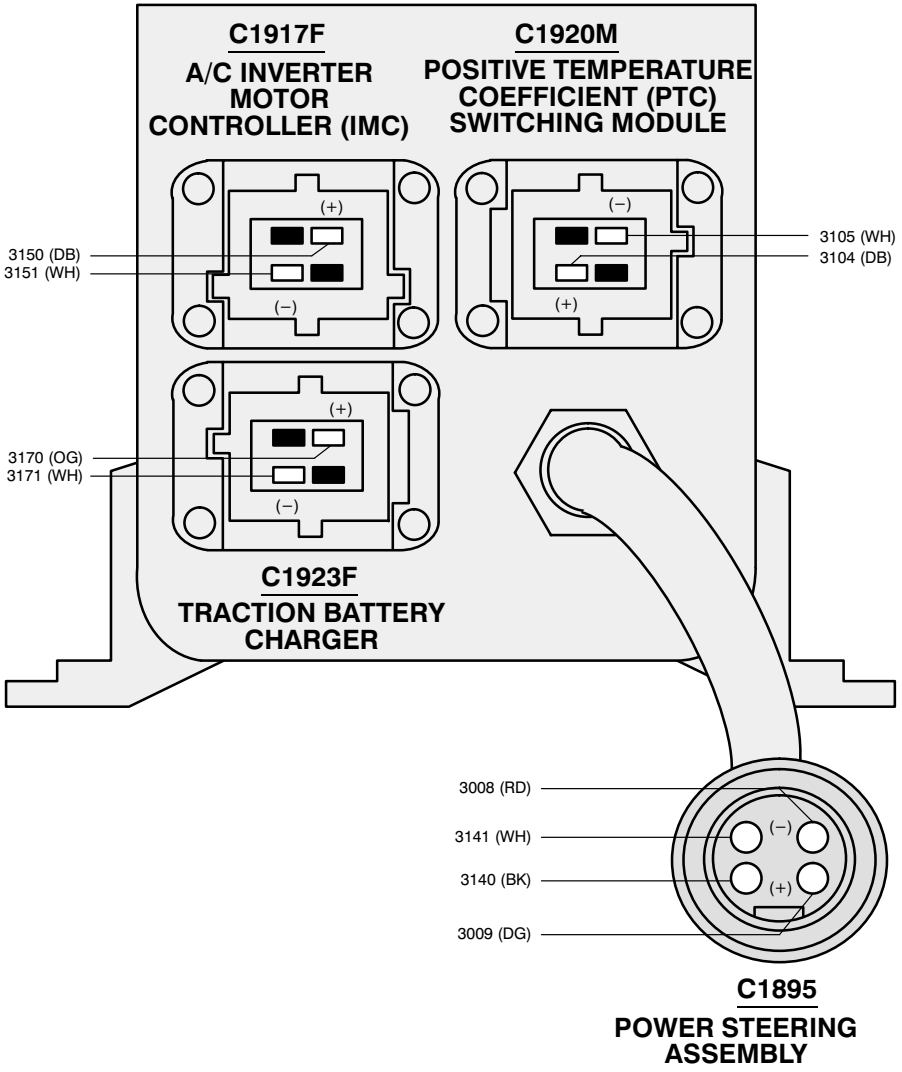
HIGH VOLTAGE POWER DISTRIBUTION BOX (HVPDB)
DRIVER'S SIDE VIEW

14B323



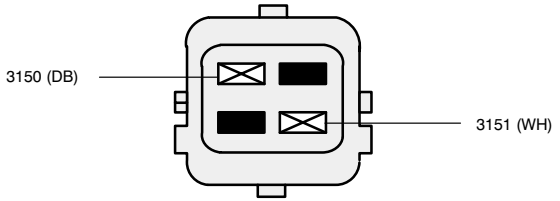
C1914M

www.AUTOMOTIVEMECHANIC.org



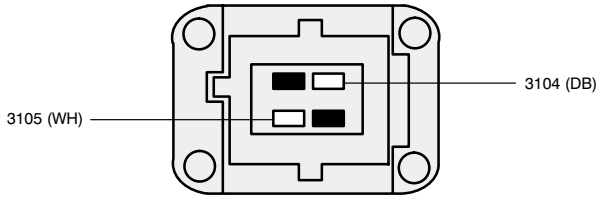
HIGH VOLTAGE POWER DISTRIBUTION BOX (HVPDB)
PASSENGER'S SIDE VIEW

14B312



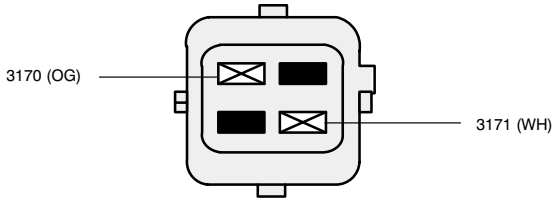
C1917M

WA0496-2E



C1920F

14B307

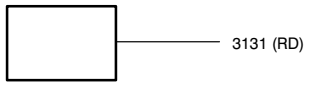


C1923M

www.AUTOMOTIVEMECHANIC.org

150-91 CONNECTOR FACES

14B305



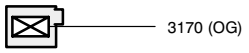
C1931

HVPDB COVER INTERLOCK SWITCH

14B305

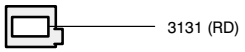
C1933F

WA0496-1



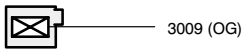
C1933M

14B305



C1932F

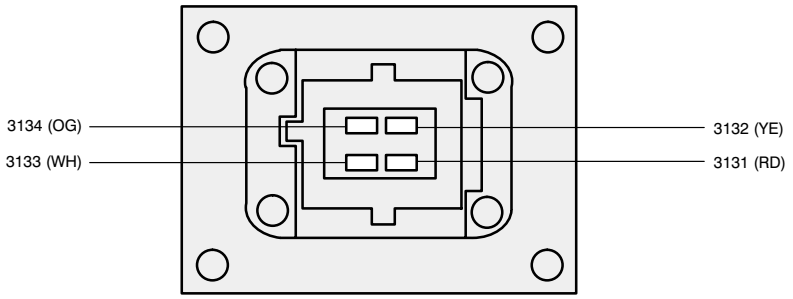
14B325



C1932M

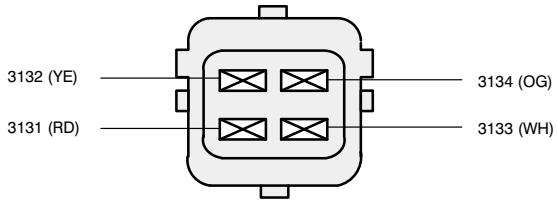
www.AUTOMOTIVE MECHANIC.ORG

14B326



C1935F

14B305



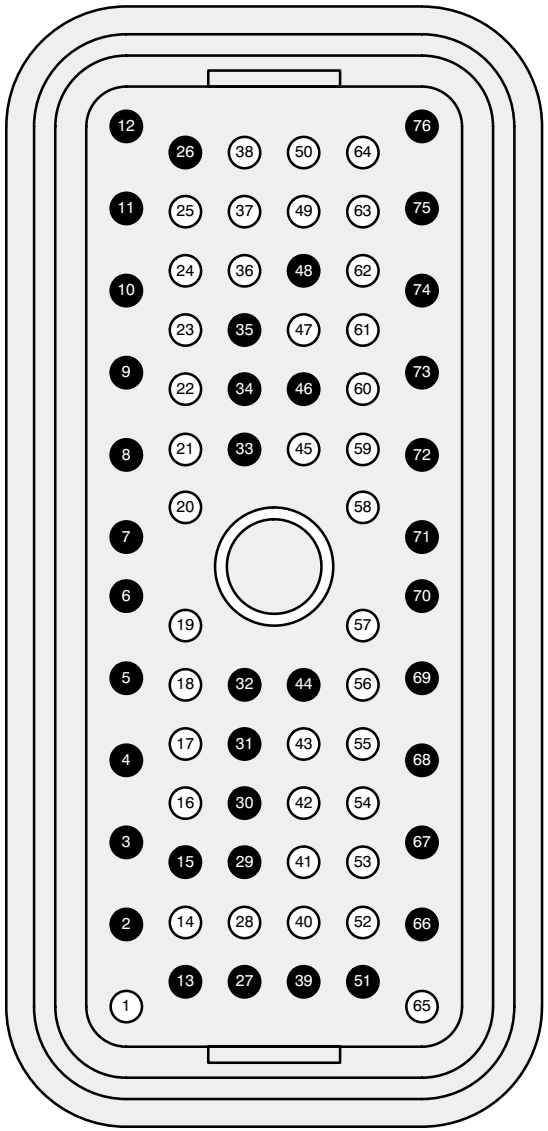
C1935M

www.AUTOMOTIVEMECHANIC.org

150-93 CONNECTOR FACES

* POSTAL

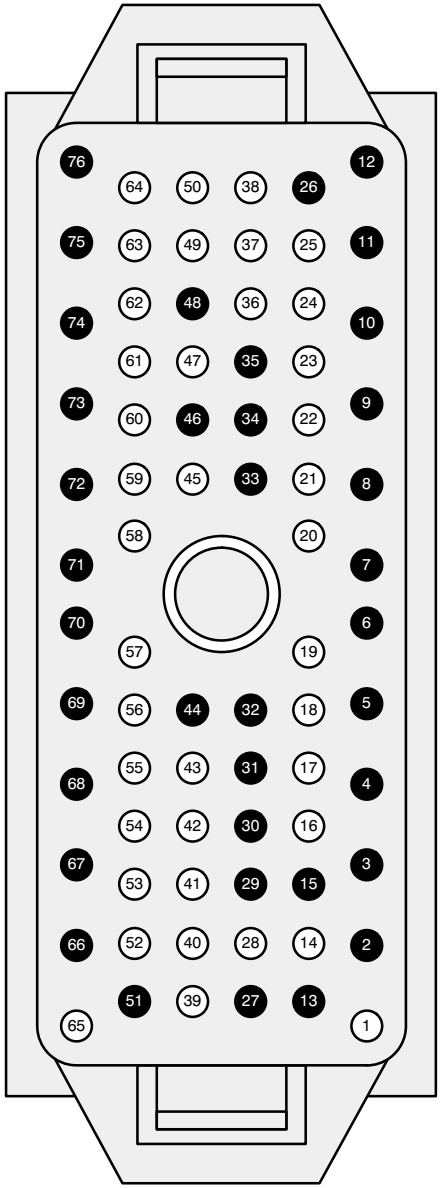
14290



C1939M

PIN	CIRCUIT	PIN	CIRCUIT
1	57 (BK)	40	3501 (DB)
2	–	41	–
3	–		*3850 (LG/PK)
4	–	42	–
5	–		*A (WH/PK)
6	–	43	–
7	–		*3396 (YE/LG)
8	–	44	–
9	–	45	787 (PK/BK)
10	–	46	–
11	–	47	974 (OG)
12	–		*977 (PK/WH)
13	–	48	–
14	4009 (LB/RD)	49	3992 (BN/YE)
	* –	50	3985 (PK)
15	–	51	–
16	3998 (GY)	52	3503 (YE)
17	3999 (DB/LG)	53	787 (PK/BK)
18	190 (WH/OG)	54	3404 (YE)
19	3006 (VT/LG)	55	3800 (LG/BK)
20	3984 (RD)	56	3009 (OG/RD)
	* –	57	3827 (GY/WH)
21	295 (LB/PK)	58	915 (PK/LB)
22	3991 (TN)	59	914 (TN/OG)
23	3986 (DG)	60	3008 (PK)
24	3997 (DG)	61	3002 (OG/LB)
25	295 (LB/PK)	62	3993 (YE/RD)
26	–	63	3401 (DB/LG)
27	–	64	554 (YE/BK)
28	3990 (LB/RD)	65	57 (BK)
29	–	66	–
30	–	67	–
31	–	68	–
32	–	69	–
33	–	70	–
34	–	71	–
35	–	72	–
36	570 (BK/WH)	73	–
37	570 (BK/WH)	74	–
38	3826 (WH)	75	–
39	–	76	–
	*3395 (OG/LB)		

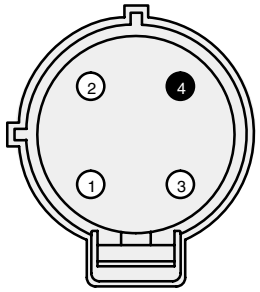
10B691



C1939F

www.AUTOMOTIVEMECHANIC.org

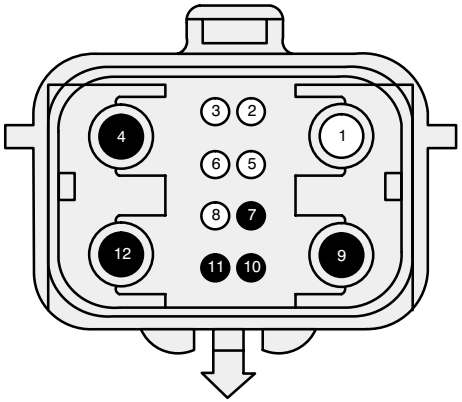
14290



C1940

MASTER CYLINDER PRESSURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3601 (WH/RD)	5V Power Feed, Signal
2	3600 (RD/WH)	Signal Return
3	3603 (RD)	Ground
4	–	NOT USED



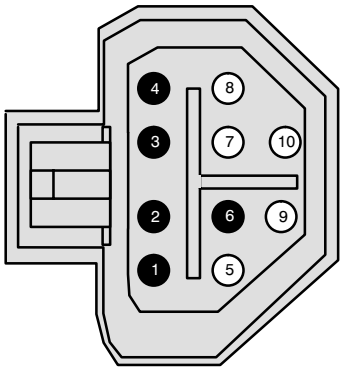
C1941

EVAC/FILL CONNECTOR #2

PIN	CIRCUIT	CIRCUIT FUNCTION
1	534 (YE/LG)	ABS Control Module
2	57 (BK)	ABS Control Module
3	57 (BK)	ABS Control Module
4	–	NOT USED
5	601 (LB/PK)	ABS Control Module Feed
6	483 (RD)	Power (Hot at all Times)
7	–	NOT USED
8	70 (LB/WH)	ISO 9141 Link
9	–	NOT USED
10	–	NOT USED
11	–	NOT USED
12	–	NOT USED

www.AUTOMOTIVE MECHANIC.ORG

150-95 CONNECTOR FACES

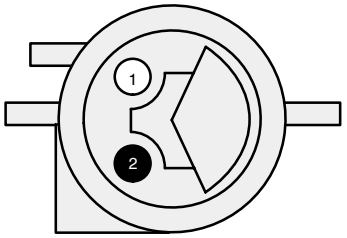


C1943

DC/DC CONVERTER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	–	NOT USED
4	–	NOT USED
5	3989 (GY/RD)	Current Fault Line
6	–	NOT USED
7	3994 (BK/YE)	DC/DC Signal Return
8	3259 (YE/BK)	DC/DC Enable
9	3224 (DG/BK)	Auxiliary Battery Termperature Sensor Return
10	3223 (YE/RD)	Auxiliary Battery Temperature Sensor Signal

14290

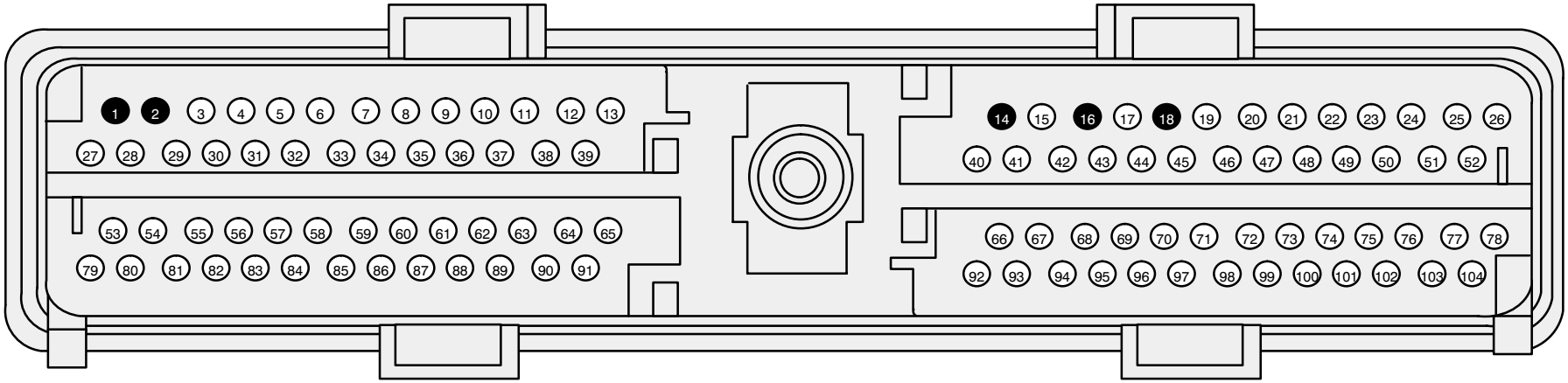


C1944

ANTI-LOCK BRAKE (ABS) MOTOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	491 (OG/LB)	ABS Speed Controller To Speedometer/Odometer

www.AUTOMOTIVEMECHANIC.ORG



C1945

INTERFACE ADAPTER ASSEMBLY (IAA) MODULE

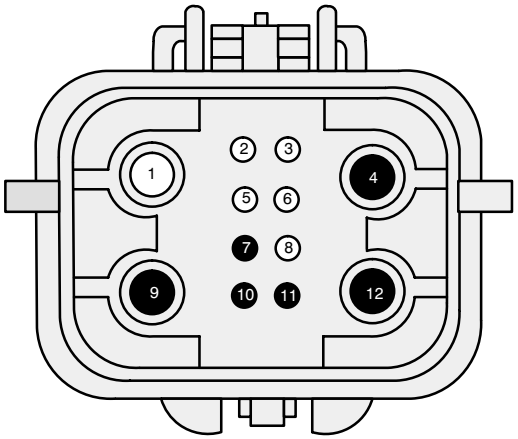
PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	20	3406 (DG/LG)	Temperature Gauge
2	–	NOT USED	21	3048 (OG)	Traction Battery State of Charge (SOC) Gauge
3	3029 (DG/OG)	A/C Pressure Sensor Signal			
4	3032 (DB/LG)	Vacuum Pressure Sensor Signal	22	3408 (DB/OG)	Economy Gauge
5	515 (OG/RD)	Variable Blower Controller (VBC) Control Signal	23	–	NOT USED
			24	3989 (GY/RD)	DC/DC Current Fault
6	245 (BN/LG)	Blend Door Actuator Motor 1 Control	25	–	NOT USED
7	246 (VT)	Blend Door Actuator Motor 2 Control	26	3999 (DB/LG)	Auxiliary Contactor Relay Status
8	3400 (BN/LB)	Power Limit Warning Indicator Lamp	27	915 (PK/LB)	J1850 Bus Minus/Data Minus
9	3402 (WH/BK)	Power Reset Indicator Lamp	28	914 (TN/OG)	J1850 Bus Plus/Data Plus
10	3041 (BK)	Charge Indicator Lamp	29	–	NOT USED
11	3042 (PK/LG)	Low State of Charge (SOC) Indicator Lamp	30	3021 (GY/BK)	Vacuum Pump Relay Control
			31	3045 (TN)	Malfunction Indicator Lamp (MIL)
12	3043 (WH/PK)	Low Oil Pressure Indicator Lamp	32	3046 (YE)	Auxiliary Battery Indicator Lamp
13	3407 (RD/WH)	Electrical Warning Hazard Indicator Lamp	33	3260 (OG/WH)	Positive Temperature Coefficient (PTC) Core “A” Control
14	–	NOT USED	34	3261 (PK/YE)	Positive Coeffcient (PTC) Core “B” Control
15	3405 (GY/RD)	Motor Enabled Gauge			
16	–	NOT USED	35	3052 (YE/LG)	Recirculation Door Solenoid
17	3044 (LB)	Economy Mode Indicator Lamp	36	3232 (YE/LG)	A/C Switched Power to A/C Inverter Motor Controller
18	–	NOT USED			
19	3020 (LB)	Coolant Pump Relay Control	37	3035 (LG/OG)	Switched Power to Positive Temperature Coefficient (PTC) Switching Module

www.AUTOMOTIVEMECHANIC.ORG

150-97 CONNECTOR FACES

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
38	361 (RD)	Variable Blower Controller (Low Side Relay Coil Drive)	71	3059 (YE/LG)	Temperature Control Ground Reference
			72	438 (RD/WH)	Blend Door Actuator Ground Reference
39	512 (TN/LG)	Brake Fluid Level Switch Input to IAA Module	73	3994 (BK/YE)	DC/DC Converter Signal Return
			74	3036 (YE/WH)	Positive Temperature Coefficient (PTC) Switching Module Reference
40	3027 (RD/WH)	A/C Compressor Speed			
41	3049 (BK/LG)	Cluster Power	75	931 (OG)	Power (Hot at All Times)
42	3998 (GY)	Auxiliary Contactor Relay Control	76	931 (OG)	Power (Hot at All Times)
43	–	NOT USED	77	3062 (BK/WH)	Ambient Temperature Sensor Reference
44	3022 (RD/YE)	Power Steering Fault Signal Input			
45	3069 (WH)	Emergency Power Off Signal Module (EPO) to Interface Adapter Assembly (IAA)	78	3025 (YE/LG)	A/C Inverter Motor Controller (IMC) Reference
			79	3060 (GY/RD)	In-Car Temperature Sensor Reference
46	3026 (RD/PK)	A/C Compressor Pulse Width Modulation	80	570 (BK/WH)	Ground
47	3220 (PK)	A/C Overtemperature Sensor Signal	81	570 (BK/WH)	Ground
48	–	In Car Temperature Sensor Signal	82	3031 (BK/PK)	A/C Pressure Sensor Ground Reference
49	3050 (WH/OG)	NOT USED	83	–	NOT USED
50	3058 (LG/RD)	Temperature Control Signal	84	3057 (LG/OG)	Temperature Control +5V Reference
51	437 (YE/LG)	Blend Door Position Signal Actuator	85	436 (RD/LG)	Blend Door Actuator +5V Reference
52	–	NOT USED	86	3030 (DG/OG)	A/C Pressure Sensor+5V Reference
53	3038 (OG)	Positive Temperature Coefficient (PTC) Switching Module Short Fault Line	87	570 (BK/WH)	Ground
54	–		88	3033 (BK/LB)	Vacuum Pressure Sensor +5V Reference
55	–	NOT USED	89	3034 (LG/RD)	Vacuum Pressure Ground Sensor Reference
56	3222 (PK/LB)	A/C Low Pressure Switch			
57	3221 (BN/LB)	A/C Overtemperature Sensor Reference	90	3068 (BN/PK)	Recirculation Vacuum Pressure Sensor Ground
58	3056 (TN/LG)	System On (Climate Control) A/C System On	91	3006 (VT/LG)	Emergency Power Off (EPO) Input
			92	–	NOT USED
59	3055 (BN/LG)	Blower/Motor Speed Control Input – 1 (HI)	93	3024 (DB/LG)	A/C Present Signal
			94	3067 (LB/RD)	Recirculation Vacuum Pressure Sensor Signal
60	754 (LG/WH)	Blower/Motor Speed Control Input – 2 (MED HI)	95	3065 (LG/VT)	Coolant Temperature Sensor Signal
61	752 (YE/RD)	Blower/Motor Speed Control Input – 3 (MED LO)	96	3061 (LB/OG)	Ambient Temperature Sensor Signal
			97	295 (LB/PK)	Power (Hot in Run or Start)
62	751 (DB/WH)	Fresh/Recirculation Switch	98	3047 (YE/WH)	Distance to Empty (DTE) Gauge
63	3053 (BN/WH)	Variable Blower Controller (VBC) Feedback	99	3023 (BK/OG)	Power Steering Disable Signal (Output)
64	148 (YE/RD)	Positive Temperature Coefficient (PTC) Switching Module Overtemperature Fault Line	100	3259 (YE/BK)	DC/DC Converter Enable
			101	3829 (LB/BK)	Hi-Fan Relay Control
65	3834 (LG)		102	3051 (BK/YE)	Evap Temperature Sensor Reference
66	3054 (BK/LG)	Fresh/Recirculation LED	103	3066 (OG/YE)	Recirculation Vacuum Pressure Sensor +5V Reference
67	3063 (TN/OG)	Evap Temperature Sensor Signal			
68	–	NOT USED	104	–	NOT USED
69	3828 (OG/BK)	LO-Fan Relay Control			
70	3064 (BK/OG)	Coolant Temperature Sensor Reference			

www.AUTOMOTIVEMECHANIC.ORG

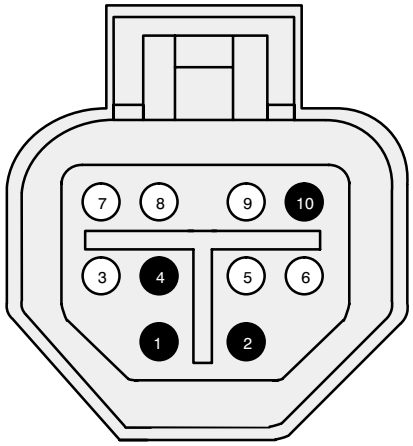


C1946

EVAC/FILL CONNECTOR #1

PIN	CIRCUIT	CIRCUIT FUNCTION
1	534 (YE/LG)	Power (Hot at All Times)
2	57 (BK)	Ground
3	57 (BK)	Ground
4	–	NOT USED
5	601 (LB/PK)	Power (Hot in Run)
6	483 (RD)	Power (Hot at All Times)
7	–	NOT USED
8	70 (LB/WH)	ISO 9141 Link
9	–	NOT USED
10	–	NOT USED
11	–	NOT USED
12	–	NOT USED

14290



C1947

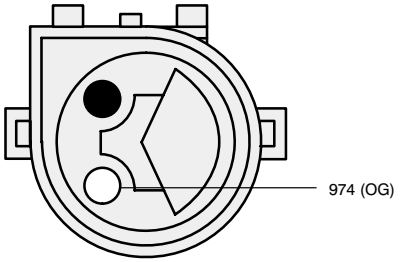
A/C INVERTER MOTOR CONTROLLER (IMC)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	3024 (DB/LG)	A/C Present
4	–	NOT USED
5	3025 (YE/LG)	A/C Inverter Reference
6	57 (BK)	Ground
7	3232 (VT)	A/C Switched Power
8	3026 (RD/PK)	A/C Compressor PWM
9	3027 (RD/WH)	A/C Compressor Speed
10	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

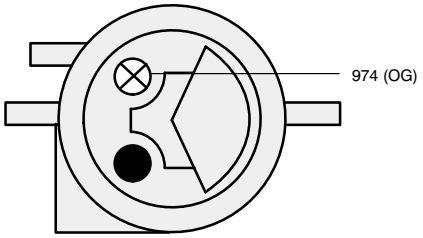
150-99 CONNECTOR FACES

14290



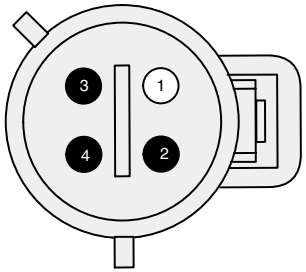
C1948F

14B308



C1948M

14290



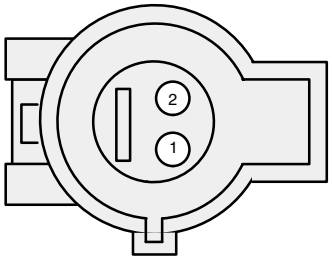
C1950

LEFT PRIMARY CRASH SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	619 (PK/WH)	Air Bag Crash Sensor Feed
2	–	NOT USED
3	–	NOT USED
4	–	NOT USED

POSTAL

14405



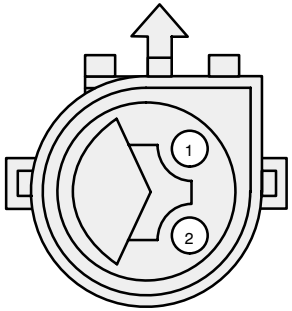
C1951

LEFT FRONT ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	519 (LG/BK)	Sensor Low to Module
2	518 (LG/RD)	Sensor High to Module

www.AUTOMOTIVEMECHANIC.org

14290

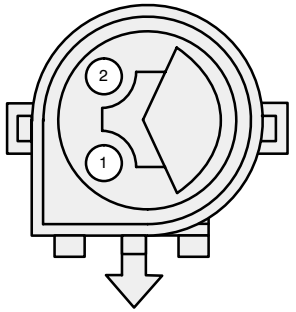


C1952

AMBIENT TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3062 (BK/WH)	Ambient Temperature Ground Reference
2	3061 (LB/OG)	Ambient Temperature Reference Feed

14290



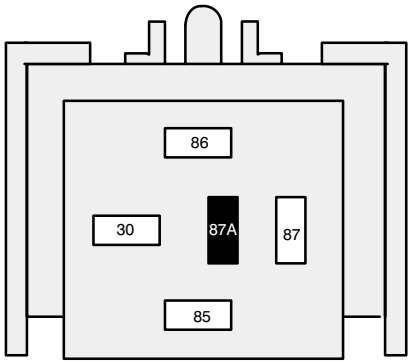
C1953

DC/DC TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3224 (DG/VT)	DC/DC Temperature Sensor Signal
2	3223 (YE/RD)	DC/DC Temperature Sensor Return

www.AUTOMOTIVEMECHANIC.org

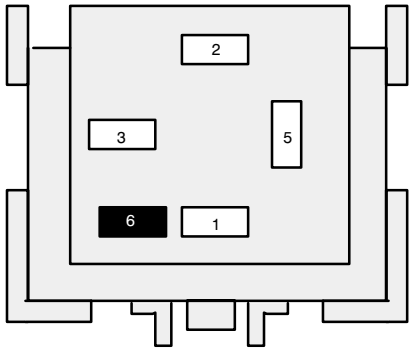
150-101 CONNECTOR FACES



C1954

FAN LOW SPEED RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	260 (RD/OG)	Cooling Fan (Low Speed Output)
85	3828 (OG/BK)	Interface Adapter Assembly (IAA) Module – Relay Control
86	50 (RD)	Power (Hot At All Times)
87	50 (RD)	Power (Hot At All Times)
87A	–	NOT USED



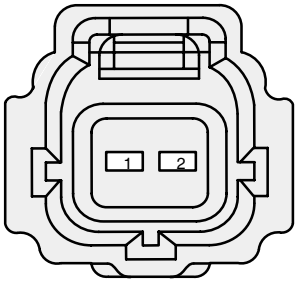
C1955

FAN HIGH SPEED RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3829 (LB/BK)	Interface Adapter Assembly (IAA) Module - Relay Control
2	50 (RD)	Power (Hot at All Times)
3	50 (RD)	Power (Hot at All Times)
5	261 (OG/BK)	Cooling Fan (High Speed Output)
6	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

14290



C1966

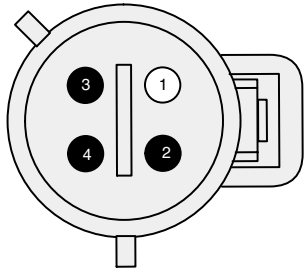
GLYCOL COOLANT TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3064 (BK/OG)	Engine Coolant Temperature Sensor, Input
2	3065 (LG/VT)	Signal, Return

www.AUTOMOTIVE MECHANIC.ORG

150-103 CONNECTOR FACES

14290

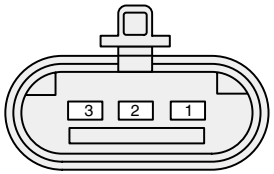


C1967

RIGHT PRIMARY CRASH SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	619 (PK/WH)	Air Bag Crash Sensor Feed
2	–	NOT USED
3	–	NOT USED
4	–	NOT USED

14290

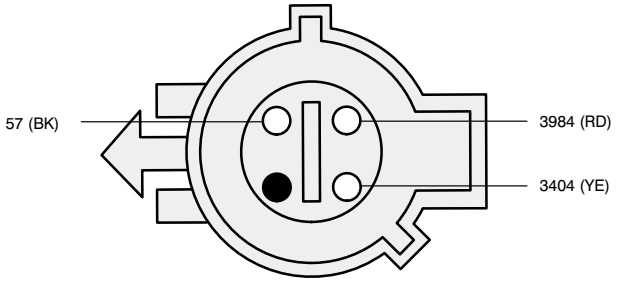


C1968

COOLING FAN

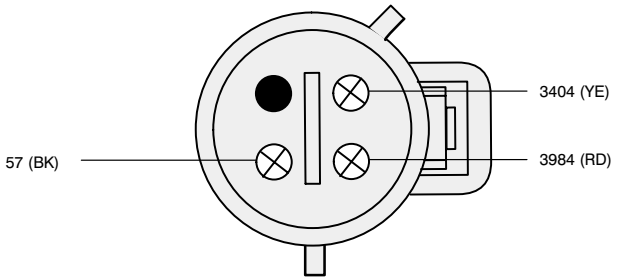
PIN	CIRCUIT	CIRCUIT FUNCTION
1	261 (OG/BK)	Cooling Fan, Low
2	260 (RD/OG)	Cooling Fan, High
3	57 (BK)	Ground

14B308



C1969F

14290

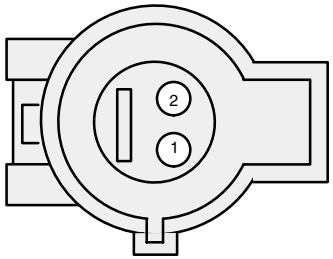


C1969M

www.AUTOMOTIVEMECHANIC.ORG

POSTAL

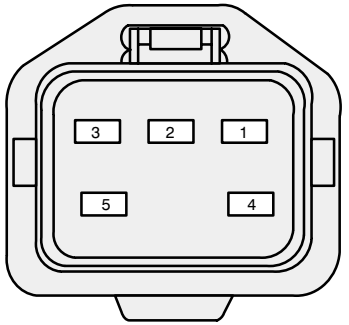
14405



C1970

RIGHT FRONT ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	524 (PK/BK)	Sensor Low to Module
2	523 (RD/PK)	Sensor High to Module



C1971

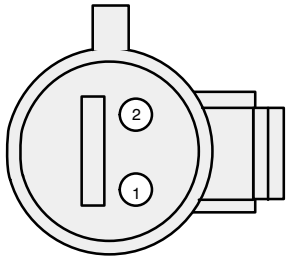
VARIABLE BLOWER CONTROLLER (VBC)

PIN	CIRCUIT	CIRCUIT FUNCTION
1	148 (YE/RD)	VBC Feedback Signal to Interface Adapter Assembly (IAA) Module
2	515 (OG/RD)	VBC Control from Interface Adapter Assembly (IAA) Module
3	361 (RD)	VBC Low Side Relay Coil
4	758 (VT/WH)	Blower Motor Ground Reference
5	57 (BK)	Ground

www.AUTOMOTIVE MECHANIC.ORG

150-105 CONNECTOR FACES

14290

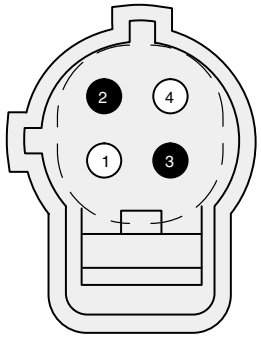


C1972

EVAPORATOR TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3051 (BK/YE)	Evaporator Temperature Sensor
2	3063 (TN/OG)	Evaporator Temperature Sensor Reference

14290



C1973

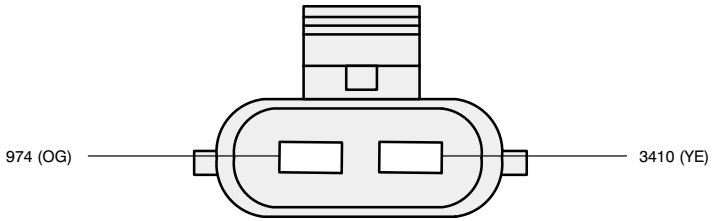
A/C LOW PRESSURE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3232 (VT)	A/C Low Pressure Switch Sensor Signal
2	–	NOT USED
3	–	NOT USED
4	3222 (PK/LB)	A/C Low Pressure Switch

www.AUTOMOTIVEMECHANIC.org

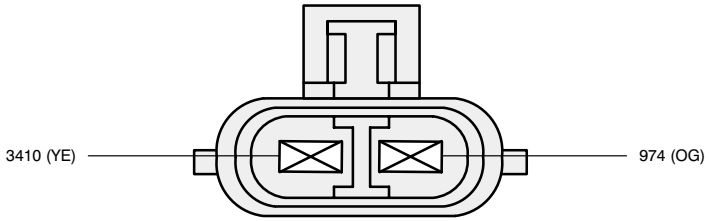
CONNECTOR FACES 150-106

10B691



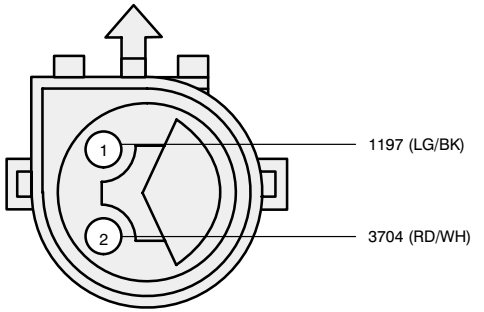
C1980F

14B309



C1980M

10B691

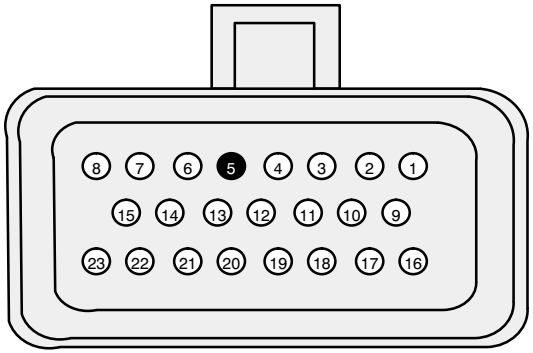


C1981

LOWER FRONT PACK TEMPERATURE SENSOR #3

www.AUTOMOTIVEMECHANIC.ORG

150-107 CONNECTOR FACES



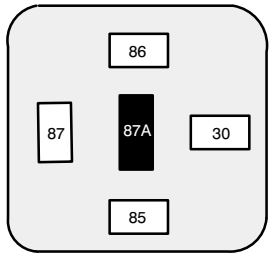
C1982

CONTACTOR BOX

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	3999 (DB/LG)	Auxiliary Contactor Relay Status	12	3138 (LB/BK)	Current Sensor Control Input
2	3001 (PK/OG)	Battery Heater #1	13	295 (LB/PK)	Power (Hot in Run and Start)
3	3136 (WH)	Negative Buss Open Control	14	190 (WH/OG)	Power (Hot At All Times)
4	3003 (PK/WH)	Emergency Power Off (EPO) Request From Battery Control Module (BCM)	15	3706 (DB)	Main Current Sensor Output
			16	3997 (DG)	Emergency Power Off (EPO) to Traction Inverter Module (TIM)
5	–	NOT USED			
6	3410 (YE)	Inertia Switch +12 Volt Input	17	3007 (VT/YE)	Battey Heater Present
7	570 (BK/WH)	Signal Ground	18	3991 (TN)	Precharge Contactor Relay Control
8	57 (BK)	Chassis Ground	19	3998 (GY)	Auxiliary Contactor Relay Control
9	3006 (PK/LG)	Emergency Power Off (EPO) Signal to Battery Control Module (BCM)	20	3137 (GY/YE)	Charge Contactor Control Input
			21	3705 (LB)	Auxiliary Current Sensor Output
10	3000 (VT)	Battery Heater #2	22	3996 (RD/YE)	Auxiliary Current Sensor Return
11	3986 (DG)	Main Contactor Relay Control	23	3602 (TN/YE)	Main Current Sensor Return

www.AUTOMOTIVEMECHANIC.ORG

LEAD ACID

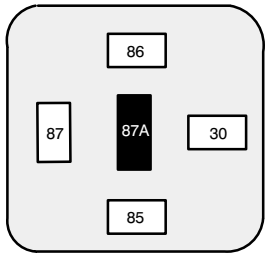


C1983

TRACTION BATTERY COOLING FAN RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	3397 (WH/RD)	Cooling Fan Power
85	3850 (LG/VT)	Cooling Fan Relay Control
86	554 (YE/BK)	Power (Hot At All Times)
87	554 (YE/BK)	Power (Hot At All Times)
87A	–	NOT USED

NiMH



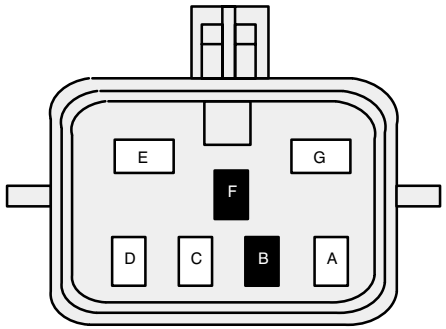
C1983

FLOW-THRU FAN RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	3395 (OG/LB)	Flow-Thru Fan Feed
85	3850 (LG/VT)	Relay Control
86	554 (YE/BK)	Relay Battery Feed
87	554 (YE/BK)	Relay Battery Feed
87A	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

150-109 CONNECTOR FACES



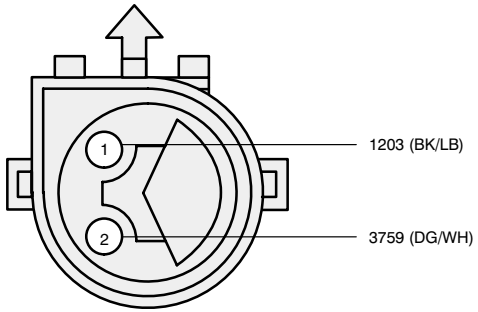
C1984

TRACTION BATTERY COOLING FAN

PIN	CIRCUIT	CIRCUIT FUNCTION
A	3395 (OG/LB)	Cooling Fan Control from Battery Control Module (BCM)
B	–	NOT USED
C	3852 (BK/LG)	Cooling Fan Feedback Ground Reference
D	3396 (YE/LG)	Cooling Fan Feedback Output Signal
E	3397 (WH/RD)	Traction Battery Cooling Fan Power
F	–	NOT USED
G	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.org

10B691



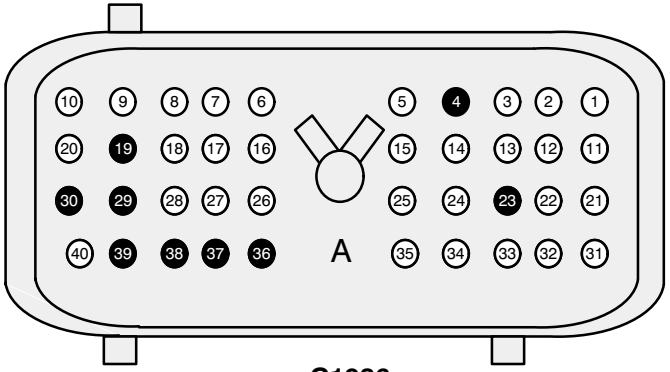
C1985

LOWER REAR PACK TEMPERATURE SENSOR #4

www.AUTOMOTIVEMECHANIC.ORG

150-111 CONNECTOR FACES

* LEAD ACID
** NiMH

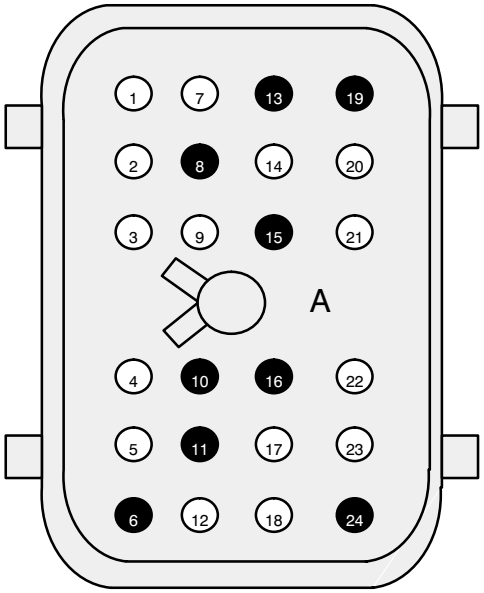


C1986

BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	3003 (PK/WH)	Emergency Power Off (EPO) Request From Battery Controller Module (BCM)	22	3704 (RD/WH)	Battery Pack Temperature Sensor #3 (TS3) Input
			23	–	NOT USED
2	3001 (VT/OG)	Battery Heater #1 Control	24	*1199 (GY/BK)	Battery Pack Temperature Sensor #2 (TS2) Return
3	3000 (VT)	Battery Heater #2 Control		**3218 (GY/BK)	
4	–	NOT USED	25	3760 (DG)	Battery Pack Temperature Sensor #2 (TS2) Input
5	3826 (WH)	Charger Power			
6	3009 (OG/RD)	Charger Pilot Enable	26	*1203 (BK/LB)	Battery Pack Temperature Sensor #4 (TS4) Return
7	3992 (BN/YE)	Charger Mode		**3219 (BK/LB)	
8	3827 (GY/WH)	Charger Charging	27	*3759 (DG/WH)	Battery Pack Temperature Sensor #4 (TS4) Input
9	3703 (BN/WH)	Battery Pack Temperature Sensor #1 (TS1)		**3758 (OG/RD)	
			28	*3396 (YE/LG)	Cooling Fan Feedback Signal
10	787 (PK/BK)	Power (Hot at All Times)		**3605 (DB/WH)	Recirculating Fan Feedback Signal
11	3401 (DB/LG)	Charge Level	29	–	NOT USED
12	3008 (VT)	Charge Max Line	30	–	NOT USED
13	3985 (PK)	Charger Enable	31	3007 (VT/YE)	Battery Heater Present Signal
14	295 (LB/PK)	Power (Hot in Start or Run)	32	3395 (OG/LB)	Cooling Fan Control Signal
15	3706 (DB)	Main Current Sensor Input	33	57 (BK)	Ground
16	3996 (RD/YE)	Auxiliary Current Sensor Return	34	3852 (BK/LG)	Cooling Fan Feedback Ground Reference
17	3705 (LB)	Auxiliary Current Sensor Input			
18	3006 (VT/LG)	Emergency Power Off (EPO) Input	35	3990 (LB/RD)	Charger Return
19	–	NOT USED	36	–	NOT USED
20	787 (PK/BK)	Power (Hot at All Times)	37	–	NOT USED
21	*1197 (LG/BK)	Battery Pack Temperature Sensor #3 (TS3) Return	38	–	NOT USED
	**3217 (LG/BK)		39	–	NOT USED
			40	*1163 (BN)	Battery Pack Temperature Sensor #1 (TS1) Return
				**3216 (BN)	

www.AUTOMOTIVEMECHANIC.org



C1987

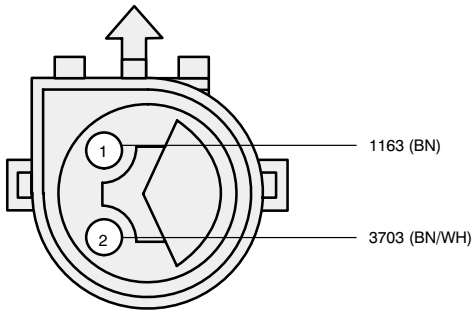
BATTERY CONTROL MODULE (BCM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	3602 (TN/YE)	Main Current Sensor Return	13	–	NOT USED
2	3993 (YE/RD)	Charger Ready	14	3800 (LG/BK)	Charger Fault Input
3	570 (BK/WH)	Ground	15	–	NOT USED
4	570 (BK/WH)	Ground	16	–	NOT USED
5	3002 (OG/LB)	Charger Line Capacity	17	3501 (DB)	Digital Transmission Range (DTR) (TR 4 Signal)
6	–	NOT USED			
7	3136 (WH)	Negative Contactor Relay Control (Output)	18	3503 (YE)	Digital Transmission Range (DTR) (TR 1 Signal)
8	–	NOT USED	19	–	NOT USED
9	3137 (GY/YE)	Charger Contactor Relay Control (Output)	20	914 (TN/OG)	J1850 Plus (+)/Data Plus (+)
			21	915 (PK/LB)	J1850 Bus Minus (−)/Data Minus (−)
10	–	NOT USED	22	3138 (LB/BK)	Current Sensor Control Output
11	–	NOT USED	23	3850 (LG/VT)	Cooling Fan Relay Control
12	3404 (YE)	Charge Cord Plugged In	24	–	NOT USED

www.AUTOMOTIVE MECHANIC.ORG

150-113 CONNECTOR FACES

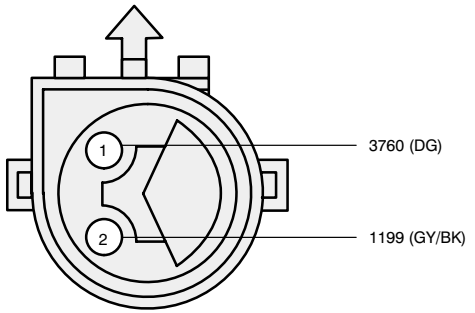
10B691



C1988

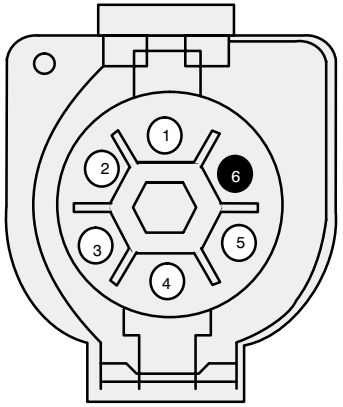
UPPER FRONT PACK TEMPERATURE SENSOR #1

10B691



C1989

UPPER REAR PACK TEMPERATURE SENSOR #2

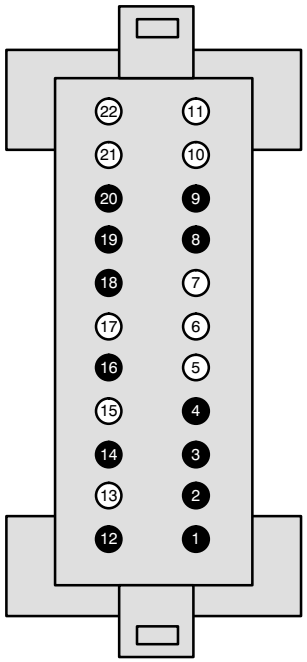


C1991

TRACTION BATTERY CHARGER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3993 (YE/RD)	Charger Ready
2	3800 (LG/BK)	Charger Fault Output
3	3985 (PK)	Charger Enable
4	3827 (GY/WH)	Charger Charging
5	566 (DG)	Power (Hot at All Times)
6	–	NOT USED

www.AUTOMOTIVE MECHANIC.ORG



C1992

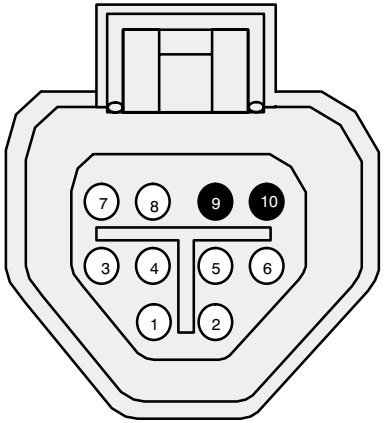
POWER STEERING ASSEMBLY

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	12	–	NOT USED
2	–	NOT USED	13	3022 (RD/YE)	Power Steering Disable Signal (Input)
3	–	NOT USED	14	–	NOT USED
4	–	NOT USED	15	679 (GY/BK)	Vehicle Speed Signal
5	3226 (BK/LG)	Steering Wheel Sensor Ground	16	–	NOT USED
6	3228 (BN)	Steering Wheel Sensor “B” Signal	17	3023 (BK/OG)	Power Steering Fault Signal (Output)
7	3227 (RD)	Steering Wheel Sensor “A” Signal	18	–	NOT USED
8	–	NOT USED	19	–	NOT USED
9	–	NOT USED	20	–	NOT USED
10	295 (LB/PK)	Power (Hot in Start or Run)	21	295 (LB/PK)	Power (Hot in Start or Run)
11	57 (BK)	Ground	22	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.org

150-115 CONNECTOR FACES

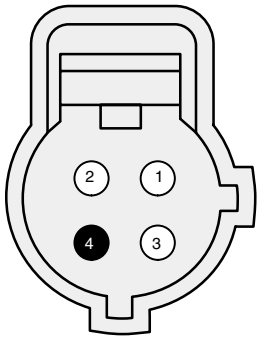
* LEAD ACID
** NiMH



C1993
TRACTION BATTERY CHARGER

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3826 (WH)	Charger Power
2	3990 (LB/RD)	Charger Return
3	3401 (DB/LG)	Charge Level
4	3002 (OG/LB)	Charger Line Capacity
5	*3984 (RD) **4009 (LB/RD)	Charge Cord Pilot
6	3008 (VT)	Charge Max Line
7	3009 (OG/RD)	Charger Pilot Enable
8	3992 (BN/YE)	Charger Mode
9	–	NOT USED
10	–	NOT USED

12B637

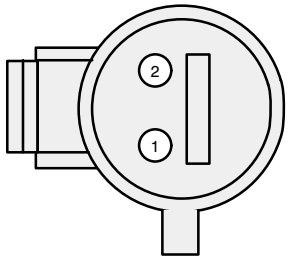


C1994
A/C PRESSURE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3031 (BK/PK)	Ground
2	3030 (BK)	Condensor Pressure 5V
3	3029 (DG/OG)	Condensor Pressure
4	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

12B637

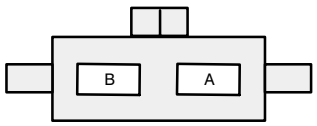


C1995

A/C OVER TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3221 (BN/LB)	A/C Over Temperature Sensor
2	3220 (PK)	Power

12B637

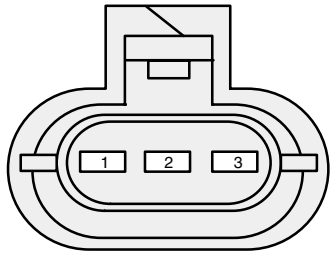


C1996

VACUUM PUMP

PIN	CIRCUIT	CIRCUIT FUNCTION
A	3230 (LB/OG)	A/C Over Temperature Sensor
B	57 (BK)	Vacuum Pump Power

12B637

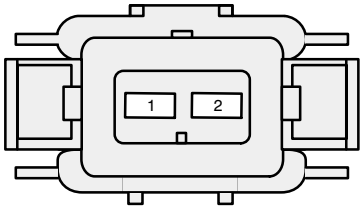


C1997

VACUUM PRESSURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3033 (BK/LB)	5V Power
2	3034 (LG/RD)	Reference Signal
3	3032 (DB/LG)	Vacuum Pressure Sensor

12B637



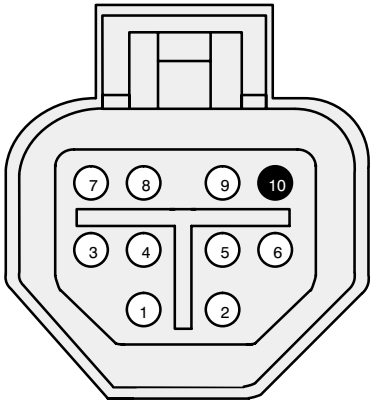
C1998

COOLANT PUMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	3229 (WH/RD)	Coolant Pump Power

www.AUTOMOTIVEMECHANIC.ORG

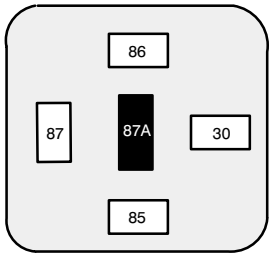
150-117 CONNECTOR FACES



C1999

POSITIVE TEMPERATURE COEFFIECIENT (PTC) SWITCHING MODULE

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3035 (LG/OG)	Postive Temperature Coefficient (PTC) Switching Module - Switched Power
2	3036 (YE/WH)	Positive Temperature Coefficient (PTC) Switching Module Reference
3	3037 (GY/WH)	Plenum Overtemperature Switch Signal
4	3260 (OG/WH)	Positive Temperature Coefficient (PTC) Switching Module Core “A” Control
5	3261 (PK/YE)	Positive Temperature Coefficient (PTC) Switching Module Core “B” Control
6	3834 (LG)	Positive Temperature Coeffiecient (PTC) Switching Module Overtemperature Fault Line
7	3038 (OG)	Positive Temperature Coefficient (PTC) Short Fault Line
8	3006 (VT/LG)	Emergency Power Off (EPO) Input
9	57 (BK)	Ground
10	–	NOT USED



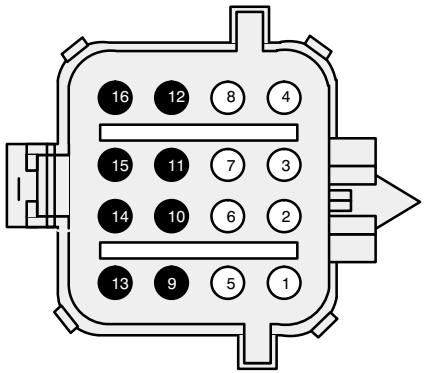
C2038

RECIRCULATING FAN RELAY

PIN	CIRCUIT	CIRCUIT FUNCTION
30	3396 (YE/LG)	Recirculating Fan Feed
85	3852 (BK/LG)	Relay Control
86	554 (YE/BK)	Relay Battery Feed
87	554 (YE/BK)	Relay Battery Feed
87A	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

POSTAL



C2099

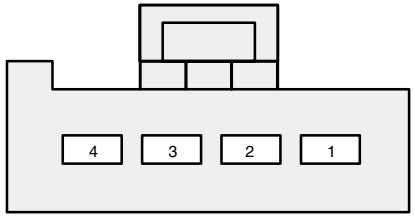
DATA LINK CONNECTOR (DLC)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	570 (BK/WH)	Signal Ground	9	–	NOT USED
2	914 (TN/OG)	J1850 Plus (+) / Data Plus (+)	10	–	NOT USED
3	915 (PK/LB)	J1850 Bus Minus (–) / Data Minus (–)	11	–	NOT USED
4	57 (BK)	Chassis Ground	12	–	NOT USED
5	693 (OG)	Module Diagnostics	13	–	NOT USED
6	3035 (LG/OG)	Positive Temperature Coefficient (PTC) Switching Module – Switching Power	14	–	NOT USED
			15	–	NOT USED
7	3826 (WH)	Charger Power	16	–	NOT USED
8	3827 (GY/WH)	Charger Charging			

www.AUTOMOTIVEMECHANIC.org

150-119 CONNECTOR FACES

14401

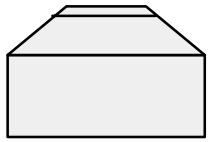


C2990

STEERING WHEEL SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3226 (BK/LG)	Ground
2	3227 (RD)	Steering Wheel Sensor “A” Signal
3	3228 (BN)	Steering Wheel Sensor “B” Signal
4	295 (LB/PK)	Electronic Cluster Feed

WA-0397-2

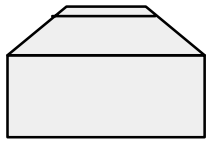


C2991

POSITIVE TEMPERATURE COEFFICIENT (PTC) OVER TEMPERATURE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3036 (YE/WH)	PTC Reference Signal

WA-0397-2

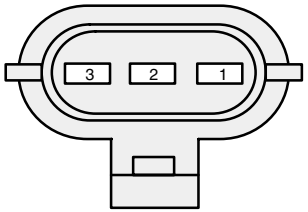


C2992

POSITIVE TEMPERATURE COEFFICIENT (PTC) OVER TEMPERATURE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3037 (GY/WH)	Plenum Over Temperature

WA-0397-2



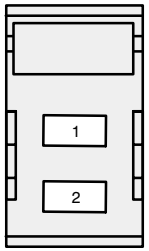
C2993

RECIRCULATION VACUUM PRESSURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3068 (BN/PK)	Ground
2	3067 (LB/RD)	Vacuum Solenoid Sensor Signal
3	3066 (OG/YE)	5V Power

www.AUTOMOTIVEMECHANIC.org

WA-0397-2

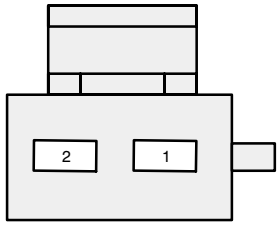


C2994

RECIRCULATION VACUUM SOLENOID

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3052 (YE/LG)	Recirculation Vacuum Solenoid
2	57 (BK)	Ground

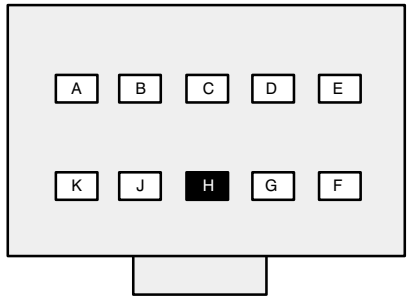
14401



C2997

IN-CAR TEMPERATURE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3050 (WH/OG)	In-Car Temperature Sensor
2	3060 (GY/RD)	Cabin Temperature Reference



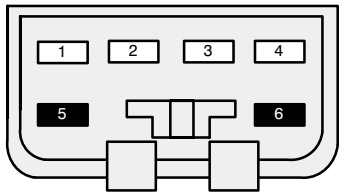
C2995

ACCELERATION POSITION SENSOR (APS)

PIN	CIRCUIT	CIRCUIT FUNCTION
A	3837 (GY/YE)	APS1 Ground
B	3011 (BK/OG)	APS2 Ground
C	3012 (WH)	APS2 Signal
D	3010 (TN)	APS2 +5V Reference
E	3013 (GY/BK)	APS3 +5V Reference
F	3835 (YE/WH)	APS1 Signal
G	3836 (YE/LB)	APS1 +5V Reference
H	–	NOT USED
J	3014 (BK/WH)	APS3 Ground
K	3015 (WH/RD)	APS3 Signal

www.AUTOMOTIVE MECHANIC.ORG

150-121 CONNECTOR FACES



C2998

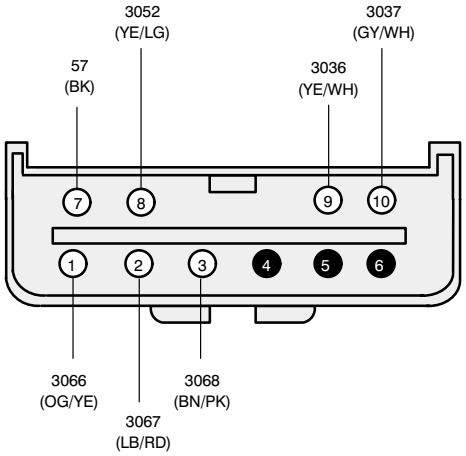
FRESH/RECIRCULATION SELECT SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3054 (BK/LG)	Fresh/Recirculation LED
2	19 (LB/RD)	Instrument Panel Lamps Feed
3	57 (BK)	Ground
4	3053 (BN/WH)	Fresh/Recirculation Switch
5	–	NOT USED
6	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

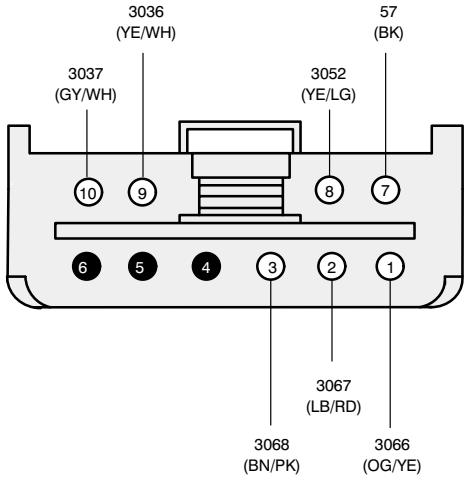
CONNECTOR FACES 150-122

WA-0397



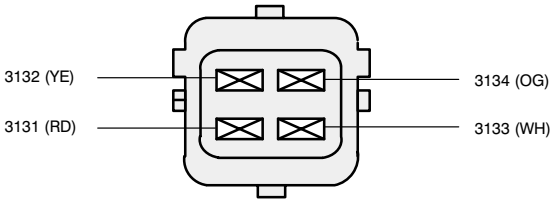
C2999M

14401



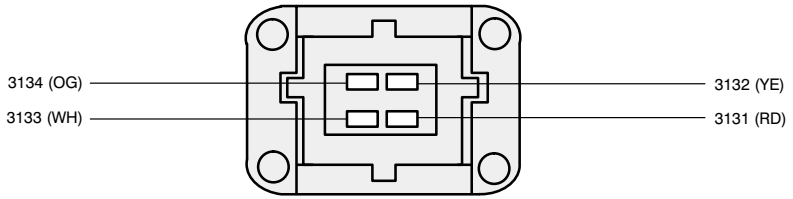
C2999F

14B326-C



C3985M

14B326-D

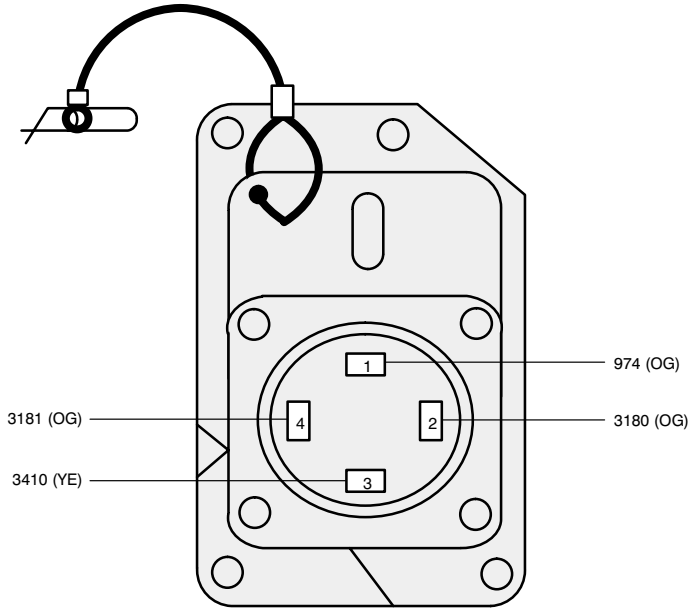


C3985F

www.AUTOMOTIVE MECHANIC.ORG

150-123 CONNECTOR FACES

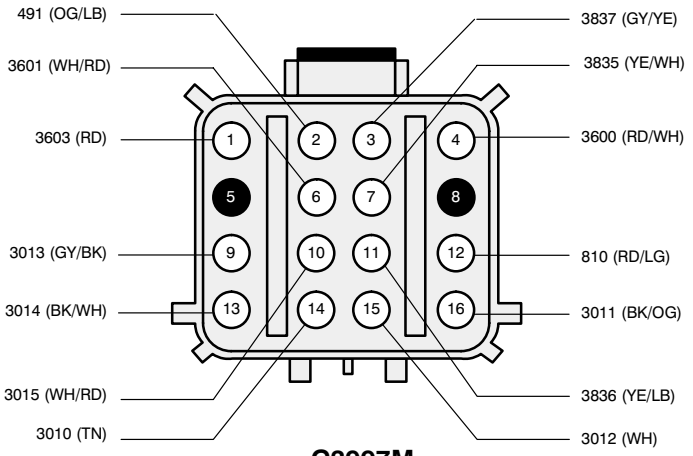
14B309



C3994

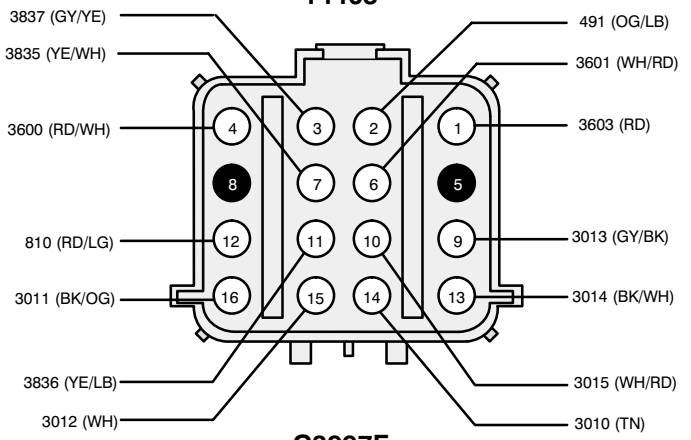
TRACTION BATTERY SUPPORT TRAY

14401 POSTAL ELECTRIC
13A724 RANGER ELECTRIC



C3997M

14405

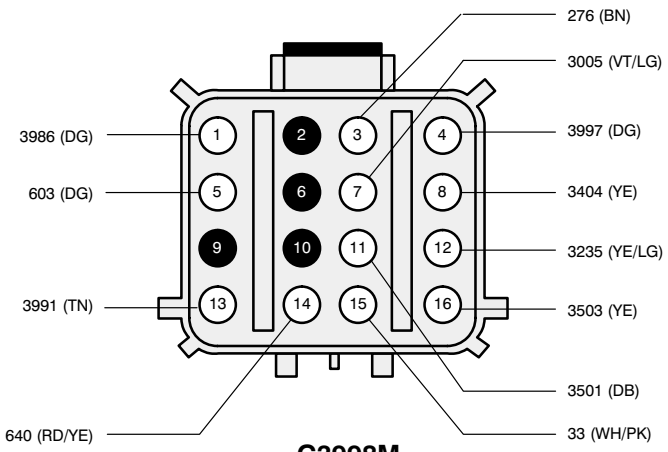


C3997F

www.AUTOMOTIVE MECHANIC.ORG

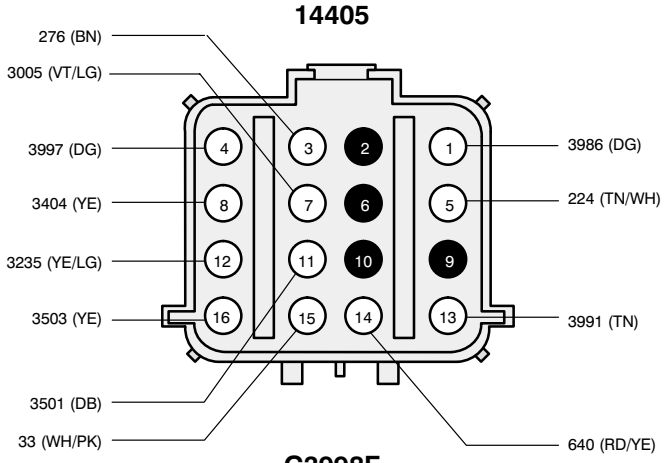
CONNECTOR FACES 150-124

14401 POSTAL
13A724 EXCEPT POSTAL



C3998M

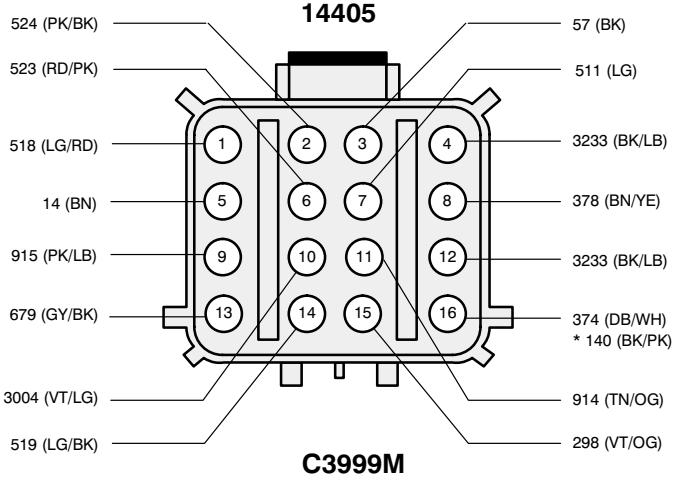
14405



C3998F

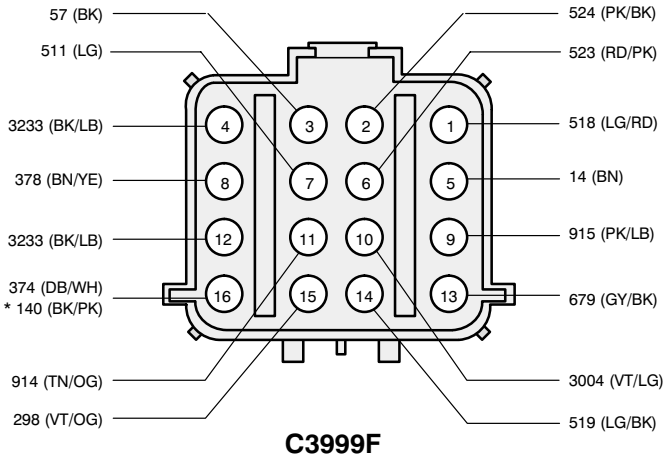
*** POSTAL**

14405



C3999M

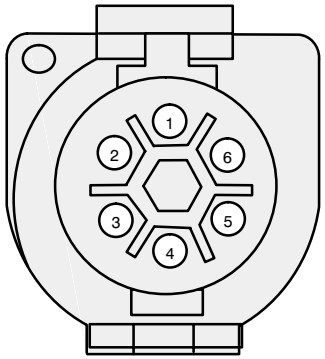
14401 POSTAL
13A724 EXCEPT POSTAL



C3999F

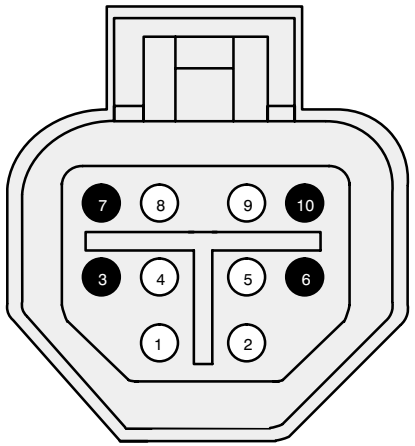
www.AUTOMOTIVE MECHANIC.ORG

150-125 CONNECTOR FACES



C4992
OIL PUMP

PIN	CIRCUIT	CIRCUIT FUNCTION
1	57 (BK)	Ground
2	3004 (VT/LG)	Oil Pump Power
3	57 (BK)	Ground
4	57 (BK)	Ground
5	57 (BK)	Ground
6	57 (BK)	Ground

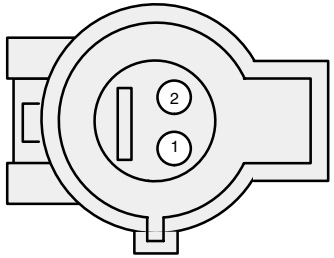


C4993
MOTOR/TRANSAXLE

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3701 (DB/WH)	Vehicle Speed Sensor (VSS) “B”
2	3757 (BK/WH)	Transaxle Motor Temperature Sensor Return
3	–	NOT USED
4	3700 (LB/RD)	Vehicle Speed Sensor (VSS) “A”
5	3708 (BN)	Motor Temperature Sensor
6	–	NOT USED
7	–	NOT USED
8	3707 (OG)	Vehicle Speed Sensor (VSS) +12V
9	3659 (BK/PK)	Vehicle Speed Sensor (VSS) Ground Reference
10	–	NOT USED

www.AUTOMOTIVEMECHANIC.org

14405

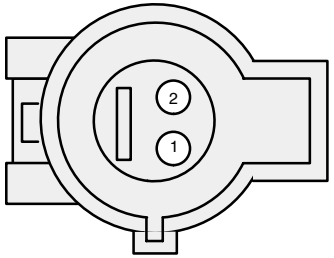


C4994

LEFT REAR ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	519 (LG/BK)	Sensor Low to Module
2	518 (LG/RD)	Sensor High to Module

14405



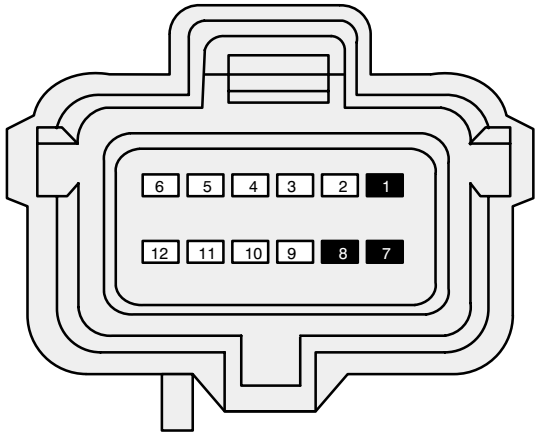
C4995

RIGHT REAR ANTI-LOCK BRAKE SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	524 (PK/BK)	Sensor Low to Module
2	523 (RD/PK)	Sensor High to Module

www.AUTOMOTIVE MECHANIC.ORG

150-127 CONNECTOR FACES

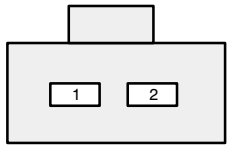


C4996

DIGITAL TRANSMISSION RANGE (DTR) SENSOR

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	3504 (BK/OG)	Digital Transmission Range (DTR) Sensor Ground
3	3502 (DG)	Digital Transmission Range (DTR) Sensor “TR3A”
4	3500 (RD)	Digital Transmission Range (DTR) Sensor “TR1”
5	3501 (DB)	Digital Transmission Range (DTR) Sensor “TR2”
6	3503 (YE)	Digital Transmission Range (DTR) Sensor “TR4”
7	–	NOT USED
8	–	NOT USED
9	298 (VT/OG)	Power (Hot in Run)
10	4009 (BK)	Jumper to Pin 12
11	140 (BK/PK)	Back-up Lamps
12	4009 (BK)	Jumper to Pin 10

14405



C4997

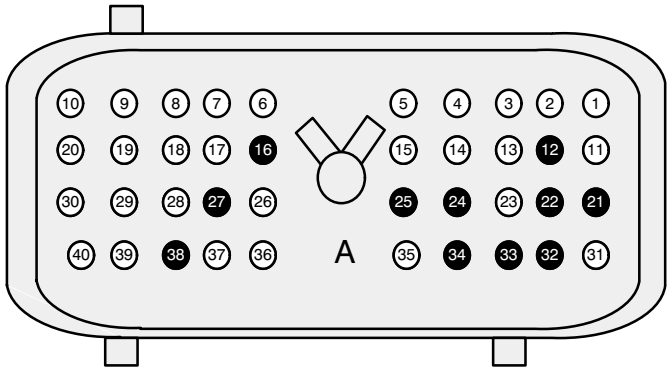
TRANSAXLE LUBE PRESSURE SWITCH

PIN	CIRCUIT	CIRCUIT FUNCTION
1	3605 (DB/WH)	Lube Pressure Switch
2	57 (BK)	Ground

www.AUTOMOTIVEMECHANIC.ORG

CONNECTOR FACES 150-128

* ELECTRIC POSTAL VEHICLE



C4998

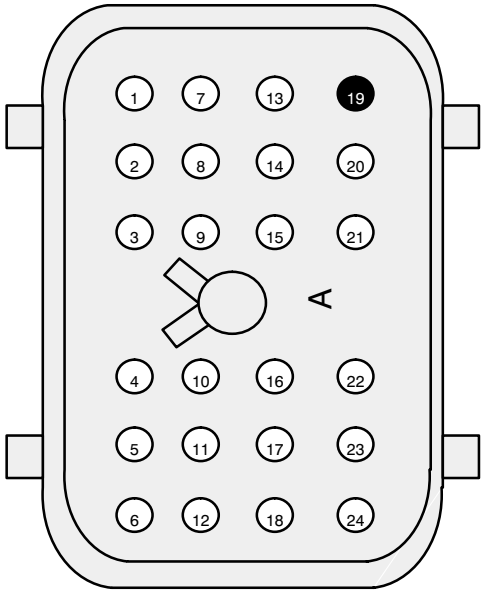
TRACTION INVERTER MODULE (TIM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED	22	–	NOT USED
	*Y (DG/BK)	Jumper to Pin 17	23	3019 (GY/BK)	SIADIS Ground
2	3708 (BN)	Motor Temperature Sensor #1 Signal	24	–	NOT USED
3	3404 (YE)	Charge Cord Plugged In Signal	25	–	NOT USED
4	3017 (DG/WH)	SIADIS RXD	26	3701 (DB/WH)	Vehicle Speed Sensor (VSS) “B” Signal
5	914 (TN/OG)	J1850 Bus Plus/Data Plus			
6	3235 (YE/LG)	Stop Lamp Relay Control	27	–	NOT USED
7	679 (GY/BK)	Vehicle Speed Signal	28	–	NOT USED
8	3986 (DG)	Main Contactor Relay Control Output		*X (LB/BK)	Jumper to Pin 2 in C4999
9	276 (BN)	Power (Hot at All Times)	29	3233 (BK/LB)	Ground
10	640 (RD/YE)	Power (Hot in Run or Start)	30	3707 (OG)	Vehicle Speed Sensor (VSS) +12V Reference
11	3757 (BK/WH)	Motor Temperature Sensor Return			
12	–	NOT USED	31	57 (BK)	Ground
13	3018 (WH)	SIADIS Download	32	–	NOT USED
14	3016 (LG/BK)	SIADIS TXD	33	–	NOT USED
15	915 (PK/LB)	J1850 Bus Minus/Data Minus	34	–	NOT USED
16	–	NOT USED	35	3997 (DG)	Emergency Power Off (EPO) Input
17	–	NOT USED	36	3700 (LB/RD)	Vehicle Speed Sensor (VSS) “A” Signal
	*Y (DG/BK)	Jumper to Pin 1			
18	3991 (TN)	Precharge Contactor Relay Control Output	37	3005 (VT/LG)	Oil Pump Relay Control
			38	–	NOT USED
19	276 (BN)	Power (Hot at All Times)	39	3233 (BK/LB)	Ground
20	640 (RD/YE)	Power (Hot in Run or Start)	40	3659 (BK/PK)	Vehicle Speed Sensor (VSS) Ground Reference
21	–	NOT USED			

www.AUTOMOTIVEMECHANIC.ORG

150-129 CONNECTOR FACES

* ELECTRIC POSTAL VEHICLE

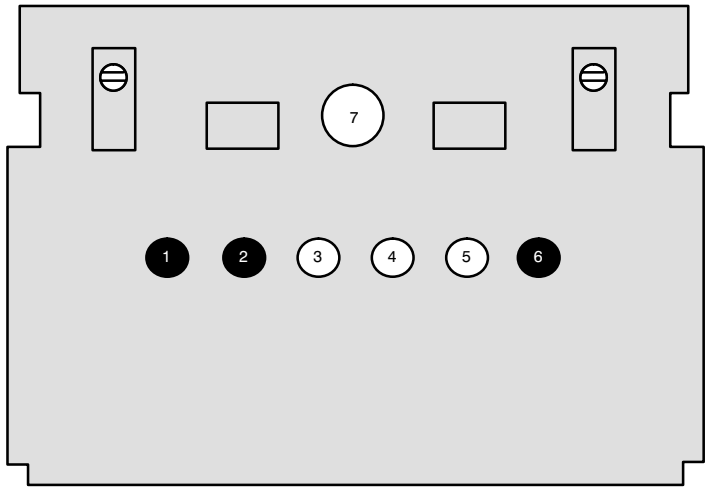


C4999

TRACTION INVERTER MODULE (TIM)

PIN	CIRCUIT	CIRCUIT FUNCTION	PIN	CIRCUIT	CIRCUIT FUNCTION
1	224 (TN/WH)	Anti-Lock Brake Control Module Fault Line	14	810 (RD/LG)	Brake Pedal Position (BPP) Switch Input
2	–	NOT USED	15	3014 (BK/WH)	APS3 Return
	*Y (DG/BK)	Jumper to Pin 28 in C4998	16	3015 (WH/RD)	APS3 Signal
3	3837 (GY/YE)	APS1 Ground	17	3013 (GY/BK)	APS3 +5V Reference
4	3835 (YE/WH)	APS1 Signal	18	3502 (DG)	Digital Transmission Range (DTR) Sensor “TR3A” Signal
5	3836 (YE/LB)	APS1 +5V Reference			
6	491 (OG/LB)	ABS Active Line Input	19	–	NOT USED
7	3500 (RD)	Digital Transmission Range (DTR) Sensor “TR1” Signal	20	3501 (DB)	Digitial Transmission Range (DTR) Sensor “TR2”
8	33 (WH/PK)	Power (Hot in Start)	21	3601 (WH/RD)	Brake Pressure Sensor +5V Reference
9	3011 (BK/OG)	APS2 Return			
10	3012 (WH)	APS2 Signal	22	3600 (RD/WH)	Brake Pressure Sensor Signal
11	3010 (TN)	APS2 +5V Reference	23	3603 (RD)	Brake Pressure Ground Reference
12	3605 (DB/WH)	Oil Pressure Switch	24	3504 (BK/OG)	Digital Transmission Range (DTR) Ground
13	3503 (YE)	Digitial Transmission Range (DTR) Sensor “TR4” Signal			

www.AUTOMOTIVEMECHANIC.ORG



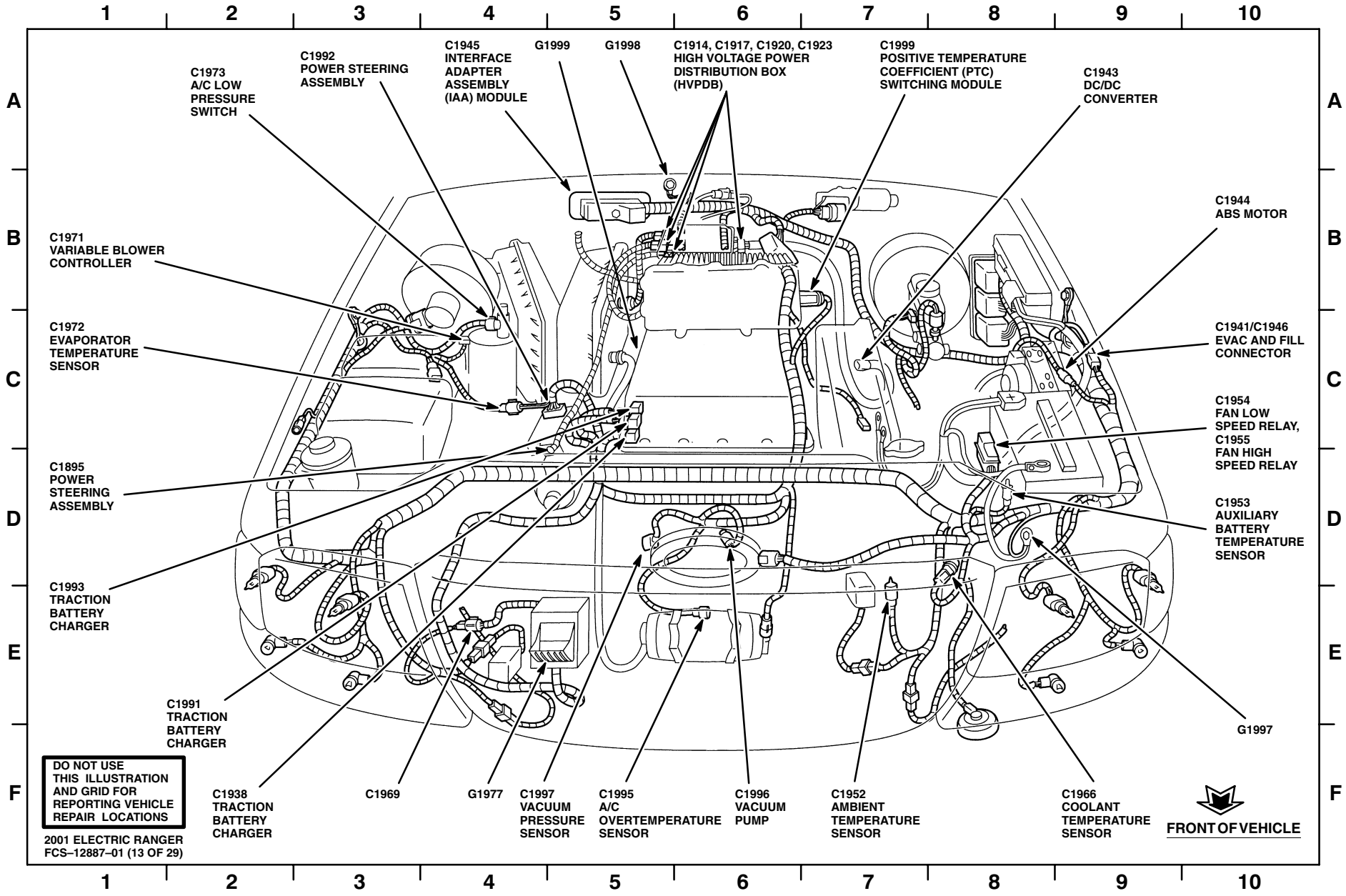
C5000

CHARGER INLET

PIN	CIRCUIT	CIRCUIT FUNCTION
1	–	NOT USED
2	–	NOT USED
3	3173 (WH)	Power from Power Control Station (PCS) (240 VAC)
4	3172 (OG)	Power from Power Control Station (PCS) (240 VAC)
5	3984 (RD)	Pilot
6	–	NOT USED
7	3174 (DG)	Ground

www.AUTOMOTIVEMECHANIC.org

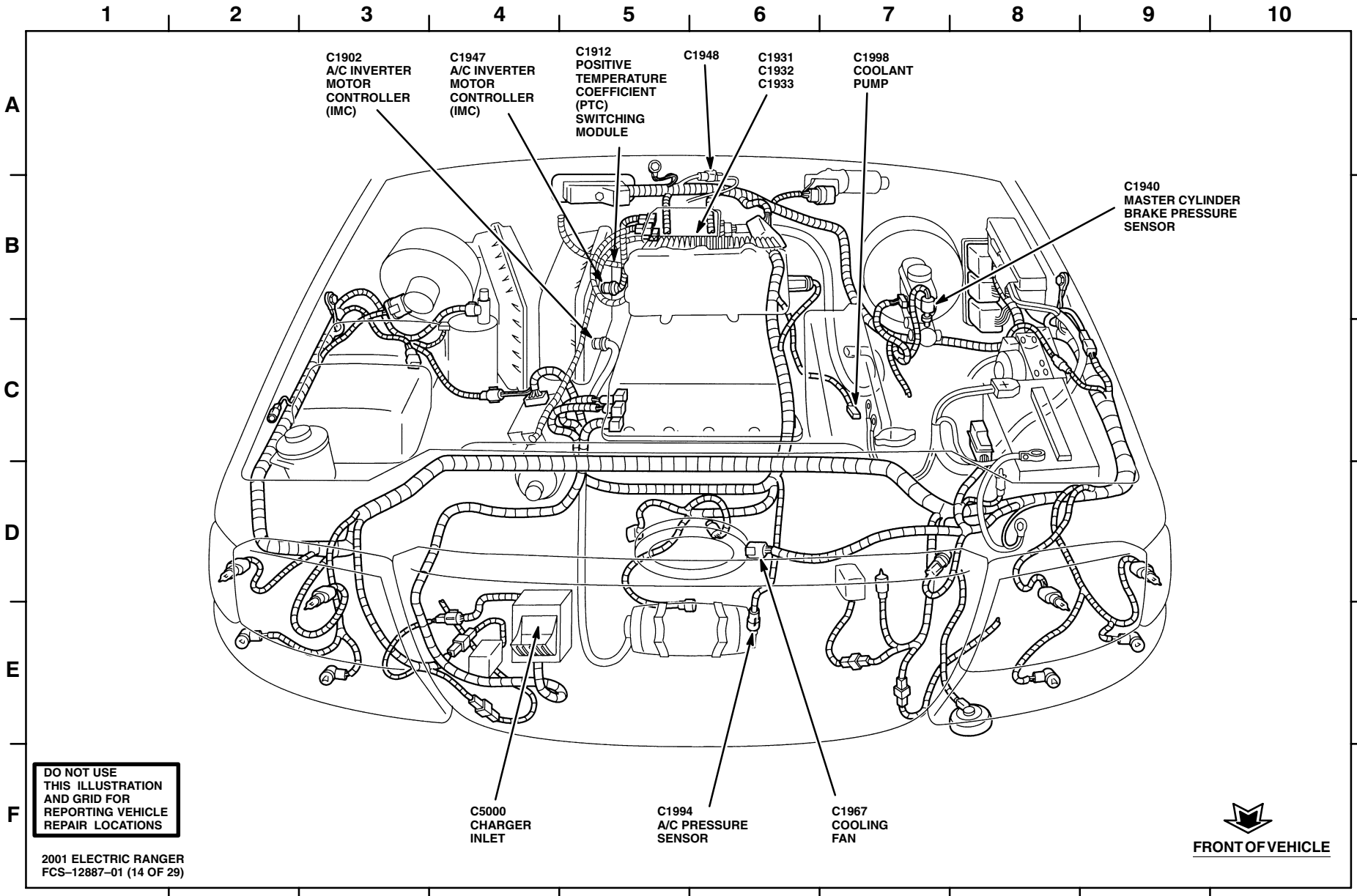
151-13 COMPONENT LOCATION VIEWS



UNDERHOOD VIEW (1 OF 2)

www.AUTOMOTIVEMECHANIC.org

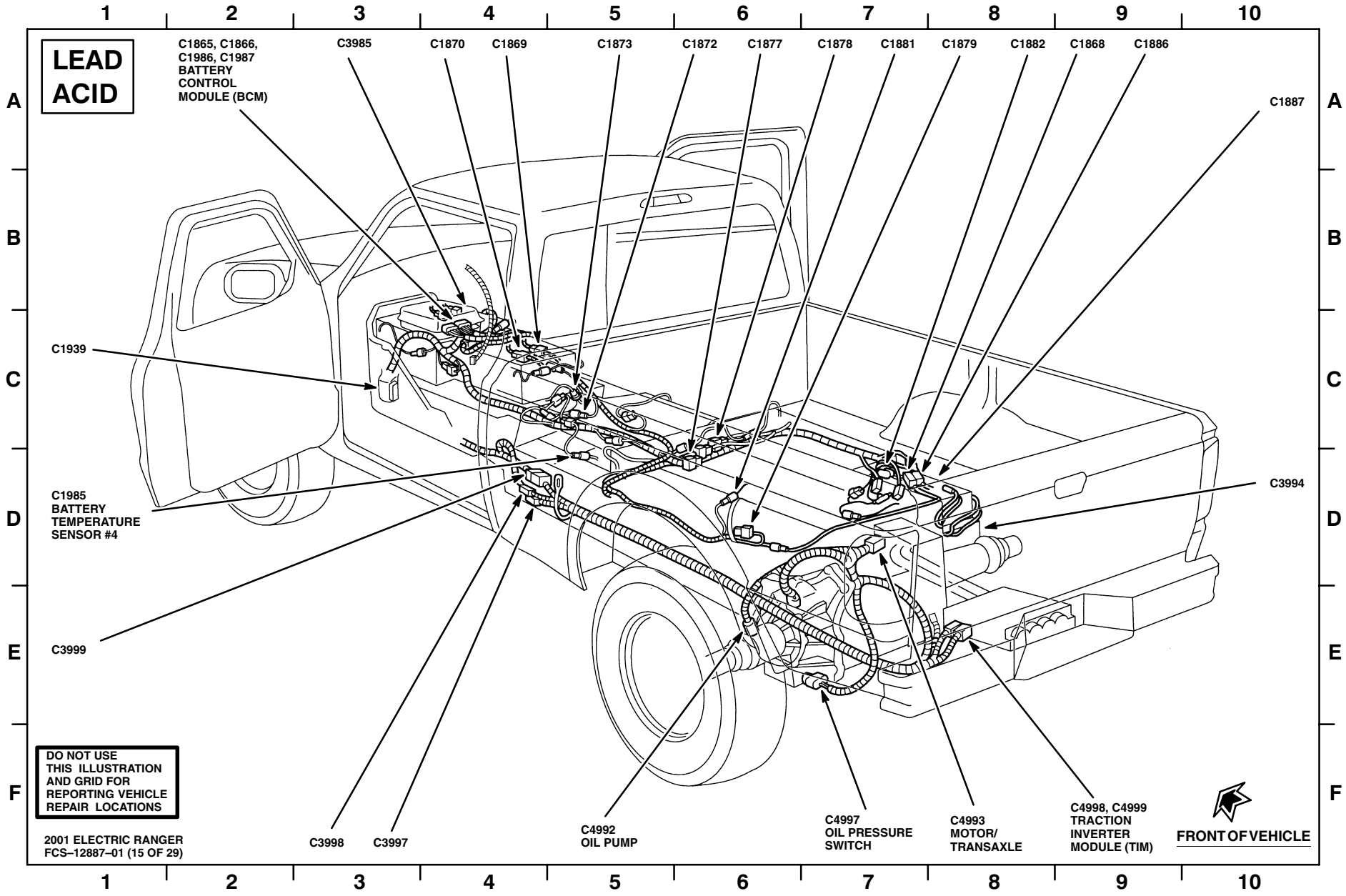
COMPONENT LOCATION VIEWS 151-14


1 2 3 4 5 6 7 8 9 10
A B C D E F
C1902 A/C INVERTER MOTOR CONTROLLER (IMC)
C1947 A/C INVERTER MOTOR CONTROLLER (IMC)
C1912 POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE
C1948
C1931 C1932 C1933
C1998 COOLANT PUMP
C1940 MASTER CYLINDER BRAKE PRESSURE SENSOR
C5000 CHARGER INLET
C1994 A/C PRESSURE SENSOR
C1967 COOLING FAN
DO NOT USE THIS ILLUSTRATION AND GRID FOR REPORTING VEHICLE REPAIR LOCATIONS
2001 ELECTRIC RANGER
FCS–12887–01 (14 OF 29)
FRONT OF VEHICLE

UNDERHOOD VIEW (2 OF 2)

www.AUTOMOTIVEMECHANIC.org

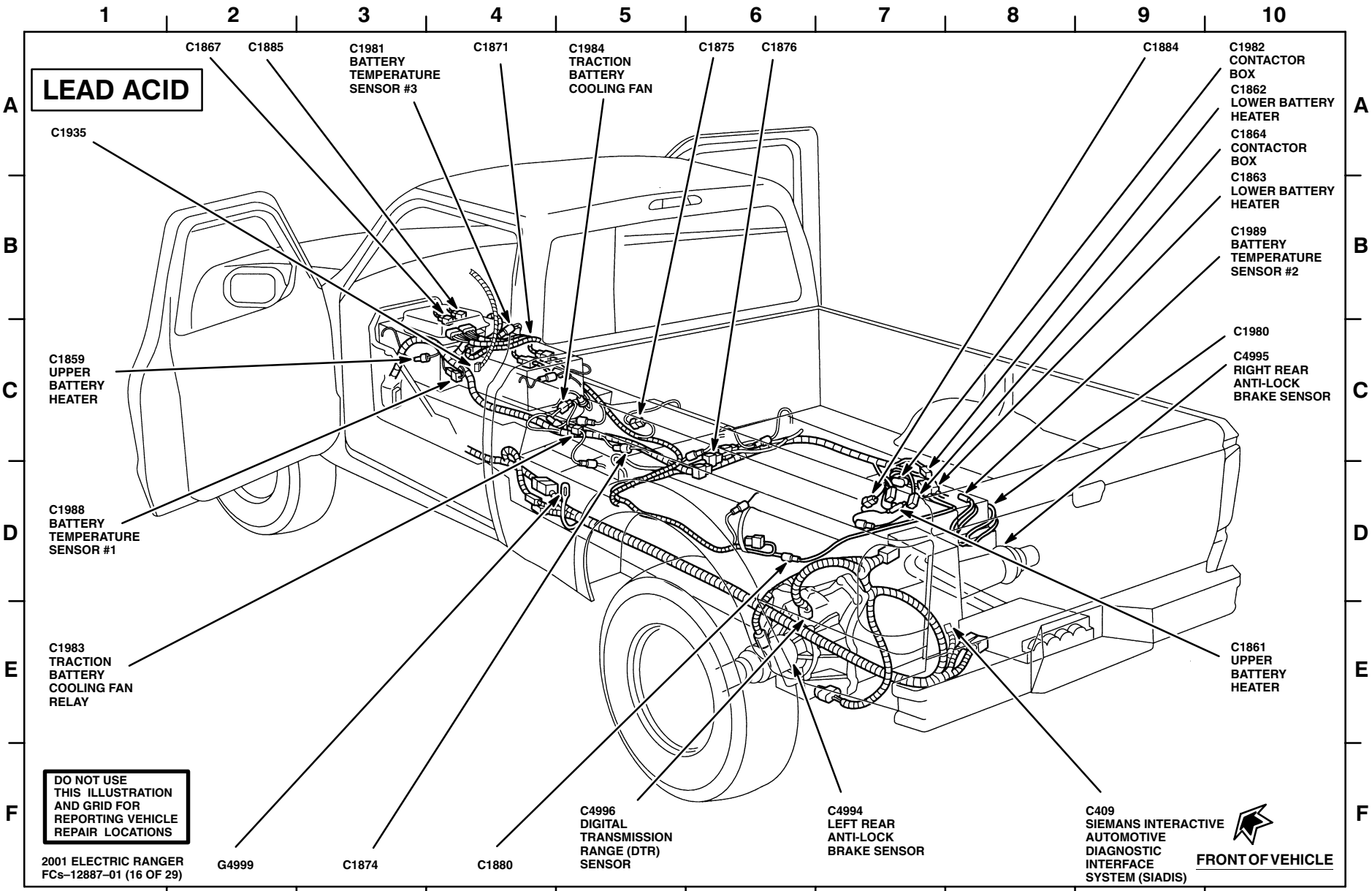
151-15 COMPONENT LOCATION VIEWS



FULL BODY VIEW (1 OF 2)

www.AUTOMOTIVEMECHANIC.org

COMPONENT LOCATION VIEWS 151-16

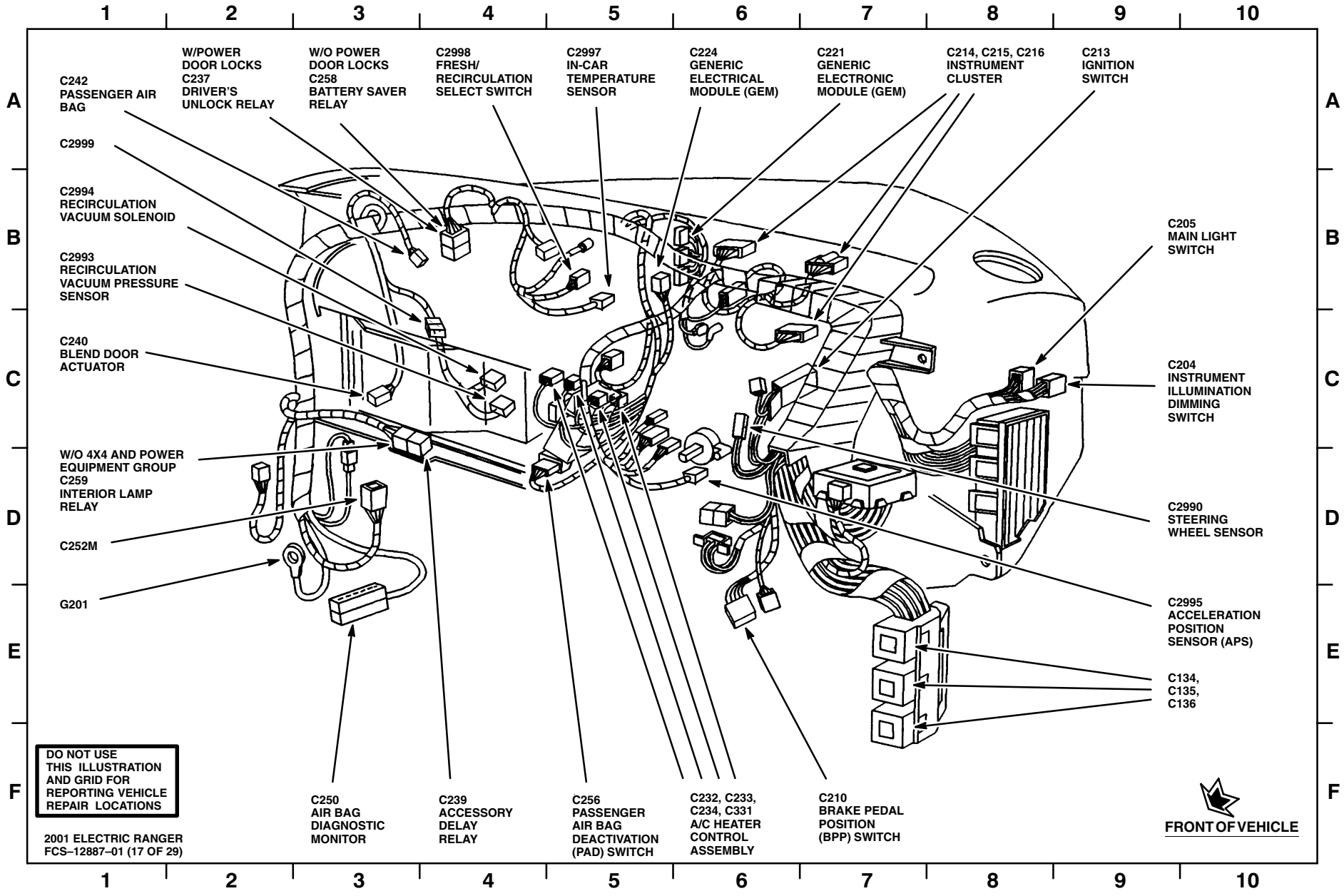


FULL BODY VIEW (2 OF 2)

www.AUTOMOTIVEMECHANIC.ORG

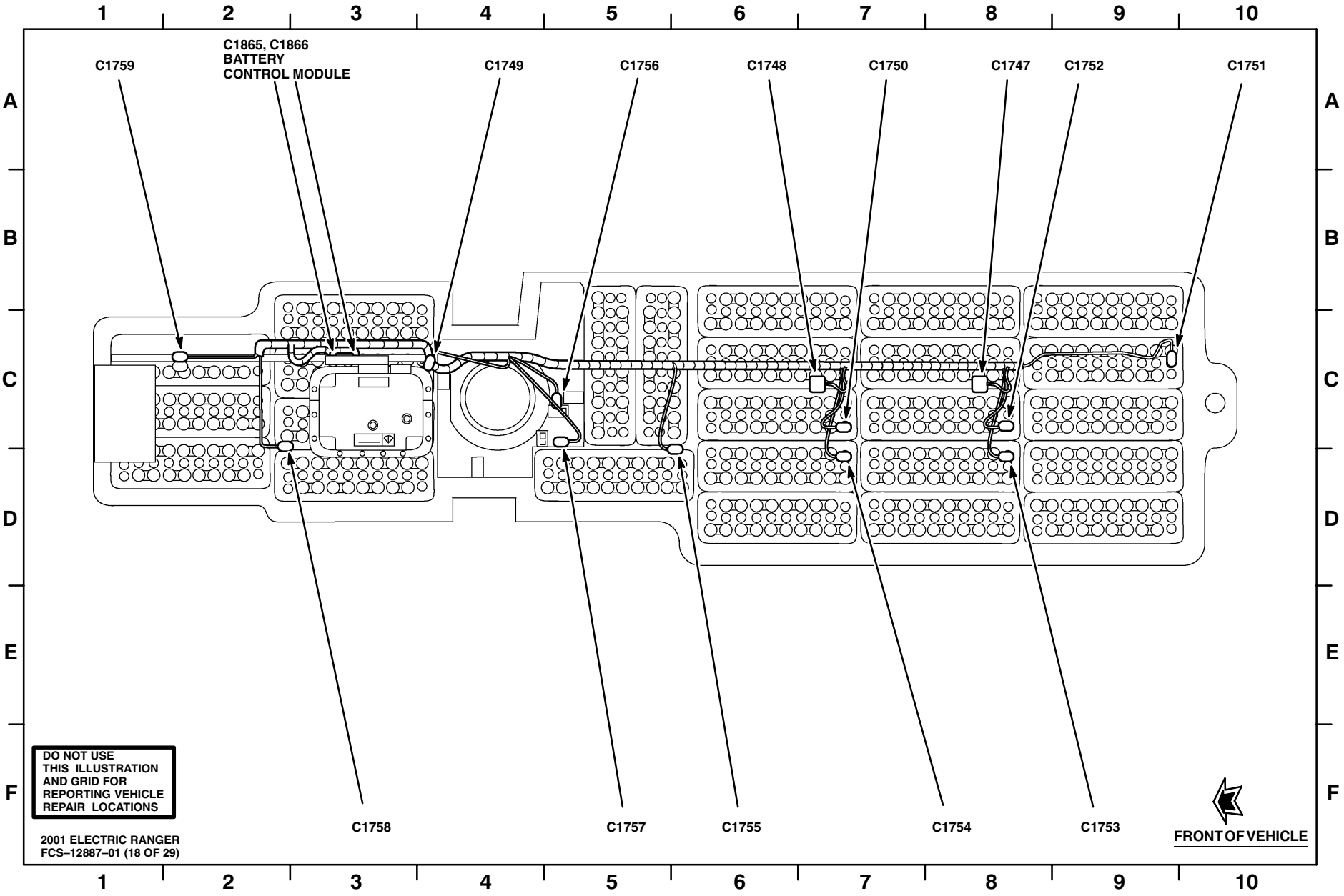
151-17 COMPONENT LOCATION VIEWS

2001 RANGER ELECTRIC VEHICLE



BEHIND INSTRUMENT PANEL

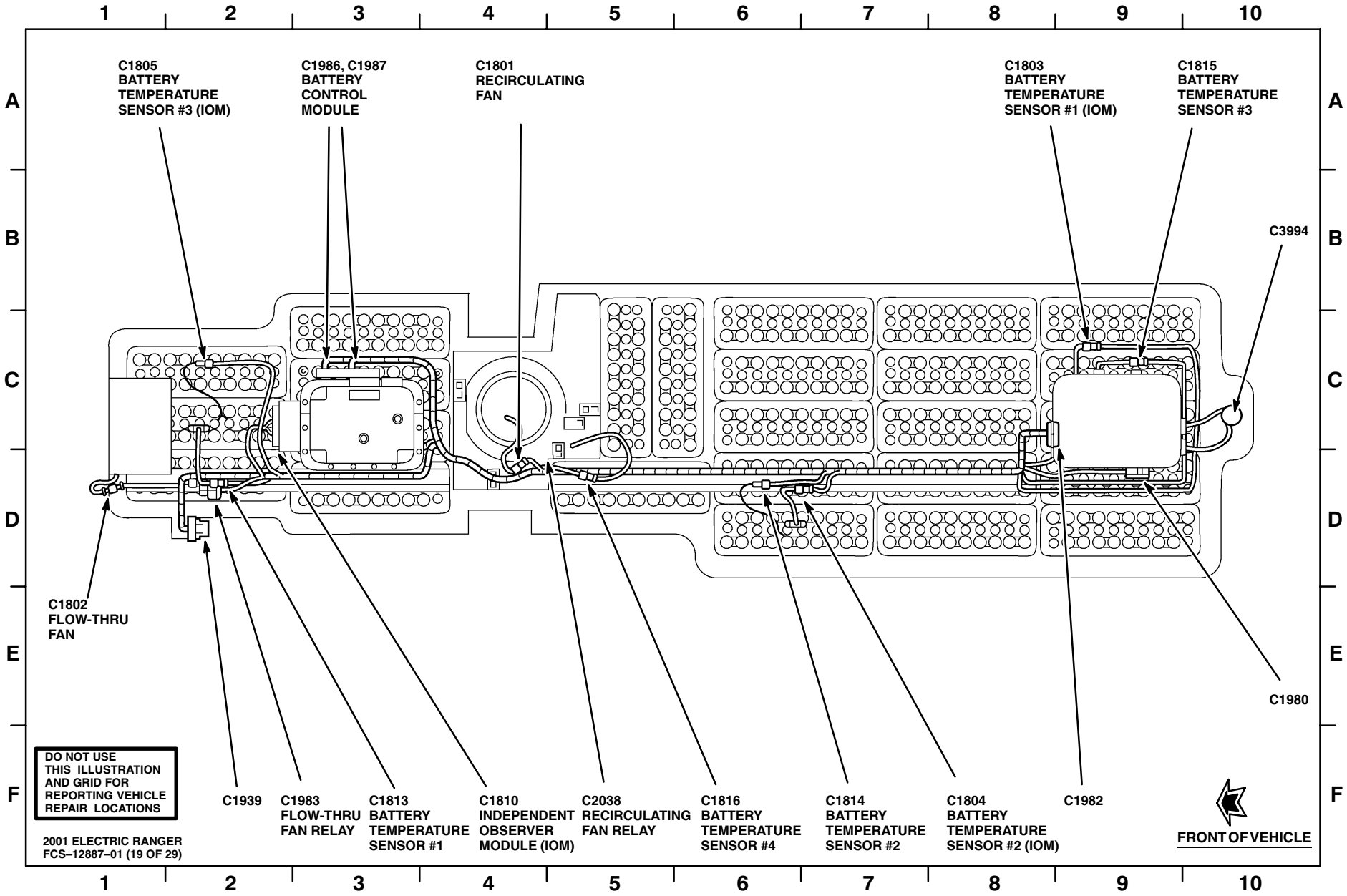
www.AUTOMOTIVEMECHANIC.org



NiMH BATTERY PACK (1 OF 2)

www.AUTOMOTIVEMECHANIC.org

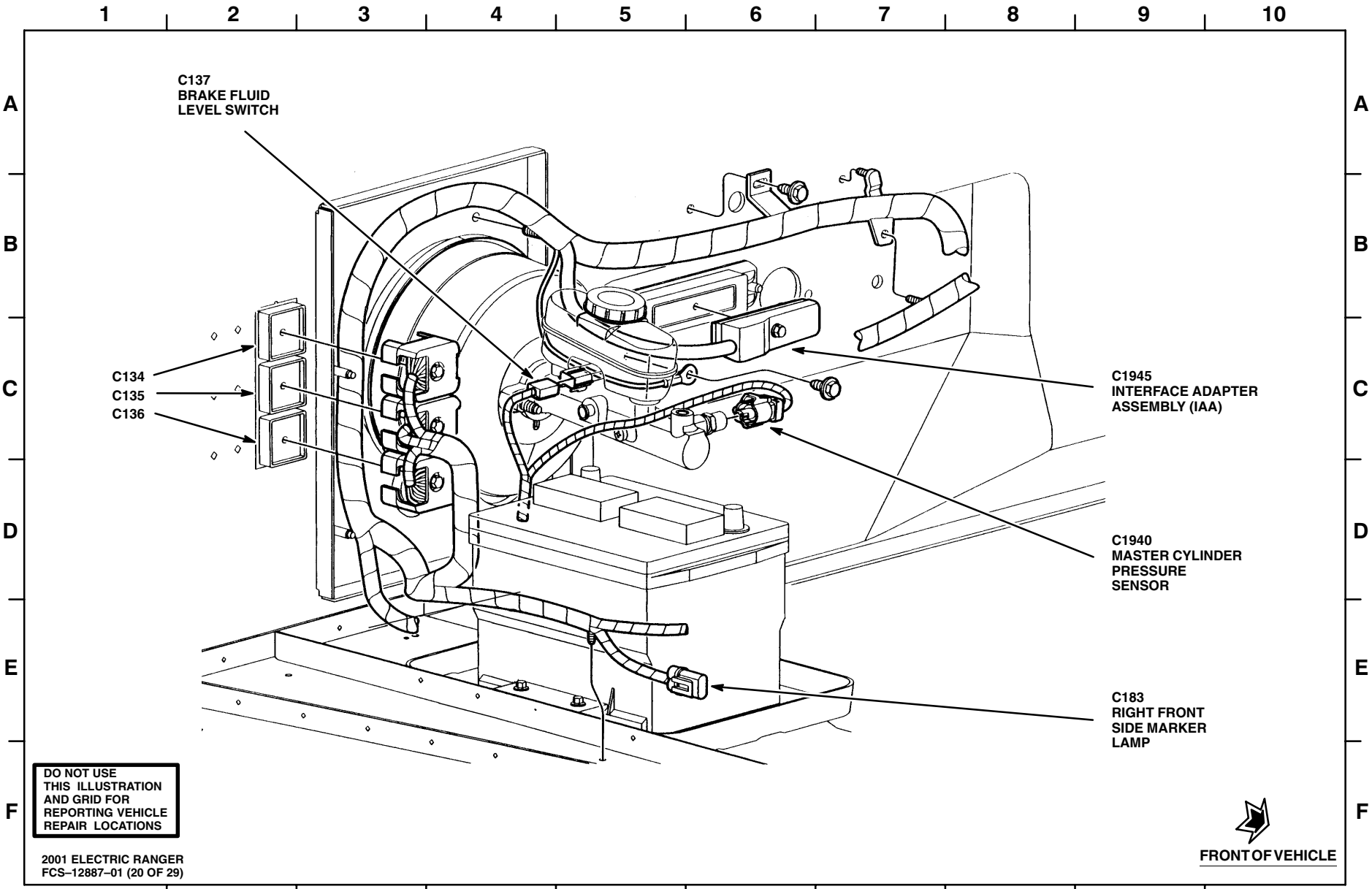
151-19 COMPONENT LOCATION VIEWS


1 2 3 4 5 6 7 8 9 10
A B C D E F
C1805 BATTERY TEMPERATURE SENSOR #3 (IOM)
C1986, C1987 BATTERY CONTROL MODULE
C1801 RECIRCULATING FAN
C1803 BATTERY TEMPERATURE SENSOR #1 (IOM)
C1815 BATTERY TEMPERATURE SENSOR #3
C3994
C1802 FLOW-THRU FAN
C1980
DO NOT USE THIS ILLUSTRATION AND GRID FOR REPORTING VEHICLE REPAIR LOCATIONS
2001 ELECTRIC RANGER FCS–12887–01 (19 OF 29)
C1939
C1983 FLOW-THRU FAN RELAY
C1813 BATTERY TEMPERATURE SENSOR #1
C1810 INDEPENDENT OBSERVER MODULE (IOM)
C2038 RECIRCULATING FAN RELAY
C1816 BATTERY TEMPERATURE SENSOR #4
C1814 BATTERY TEMPERATURE SENSOR #2
C1804 BATTERY TEMPERATURE SENSOR #2 (IOM)
C1982
FRONT OF VEHICLE

NiMH BATTERY PACK (2 OF 2)

www.AUTOMOTIVEMECHANIC.org

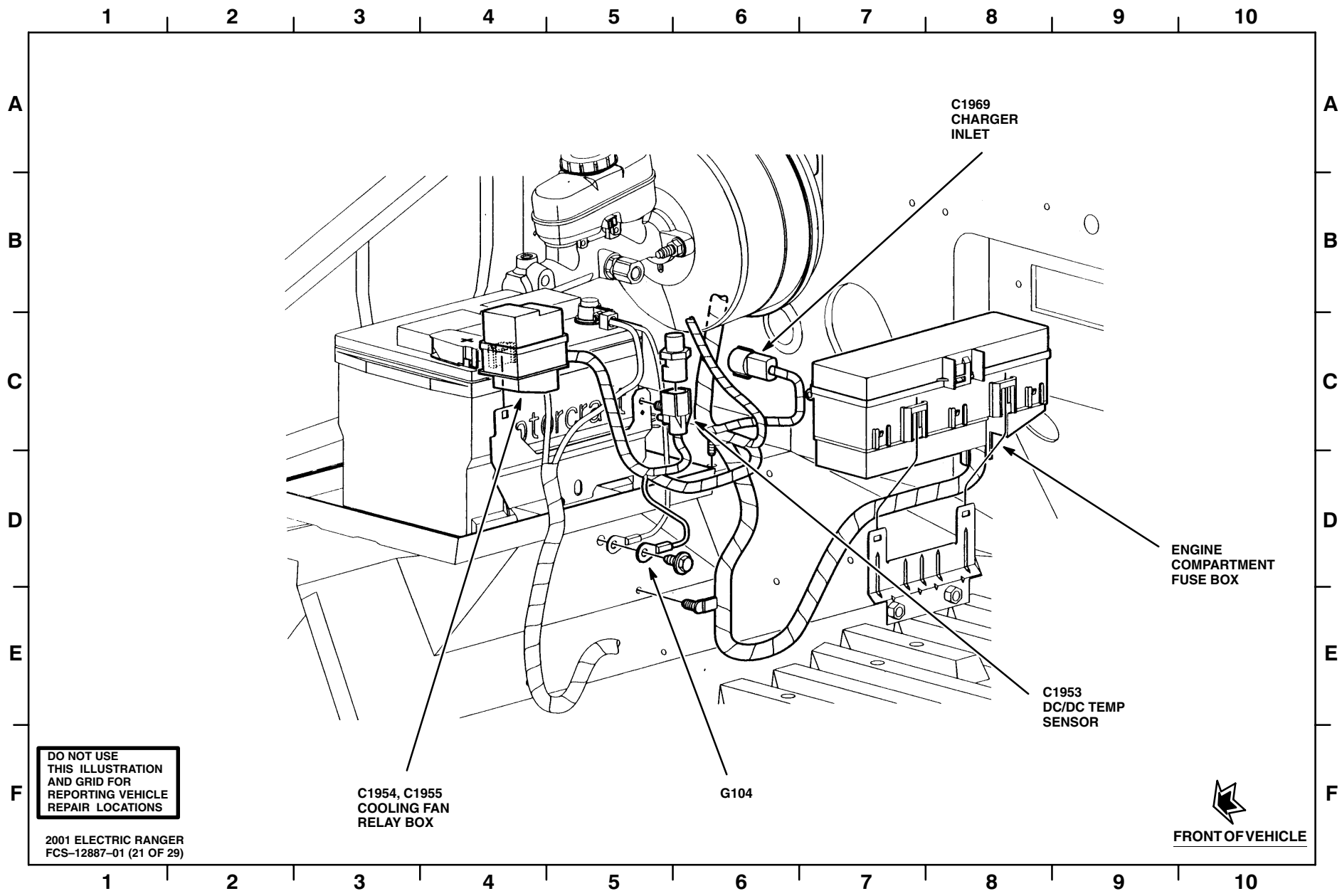
COMPONENT LOCATION VIEWS 151-20



UNDERHOOD (POSTAL 1 OF 4)

www.AUTOMOTIVEMECHANIC.org

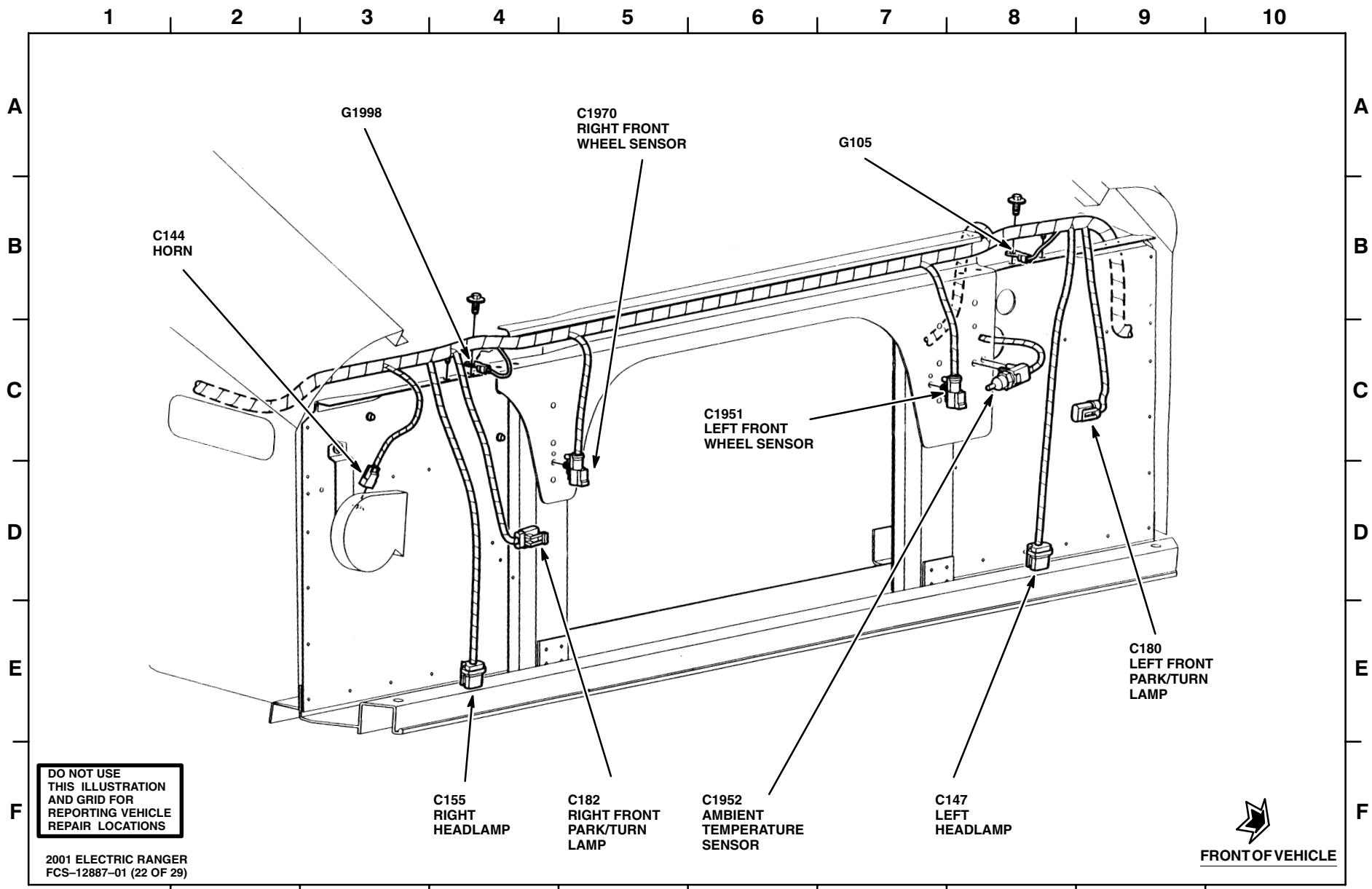
151-21 COMPONENT LOCATION VIEWS



UNDERHOOD (POSTAL 2 OF 4)

www.AUTOMOTIVEMECHANIC.org

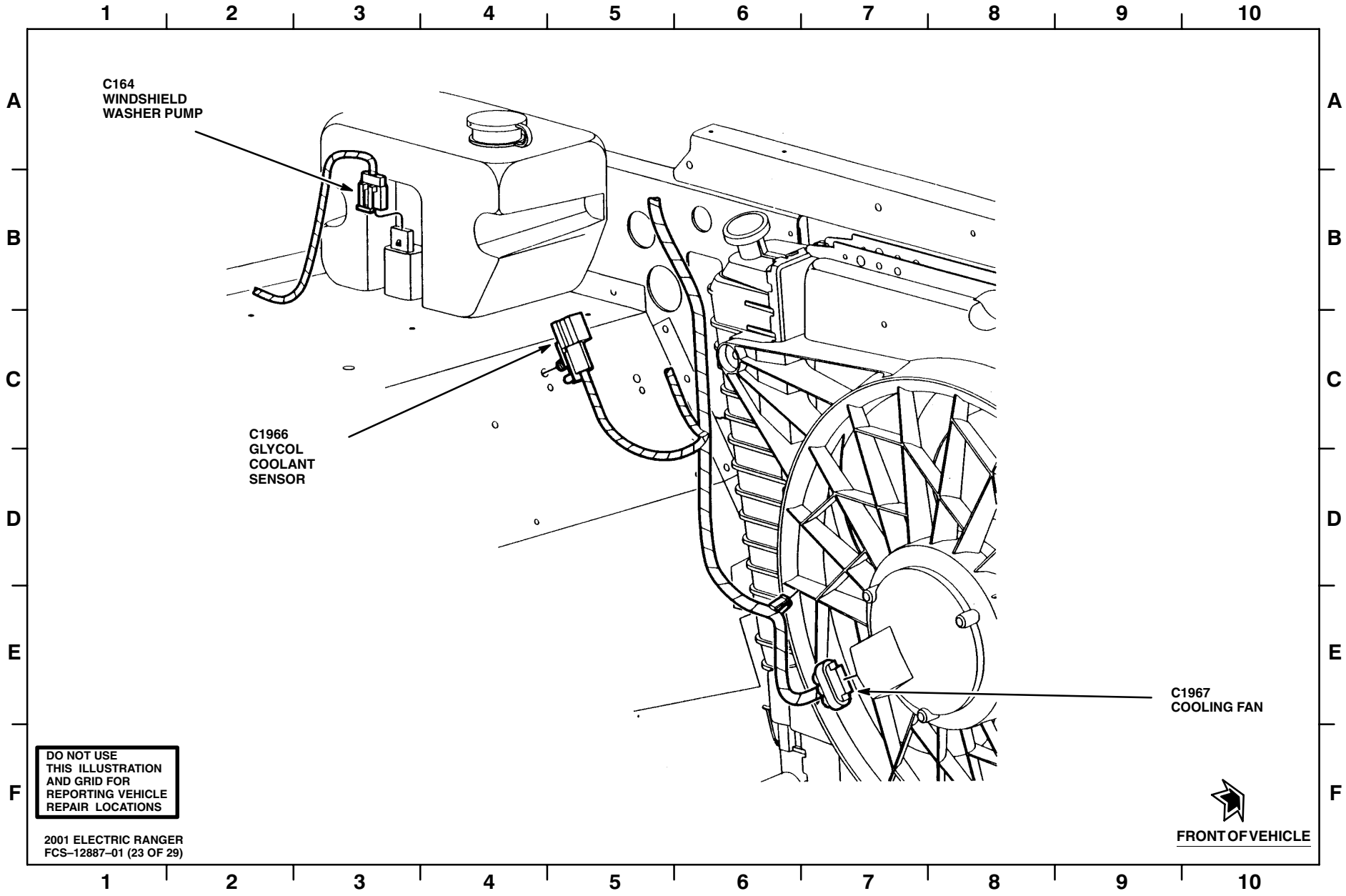
COMPONENT LOCATION VIEWS 151-22



UNDERHOOD (POSTAL 3 OF 4)

www.AUTOMOTIVEMECHANIC.ORG

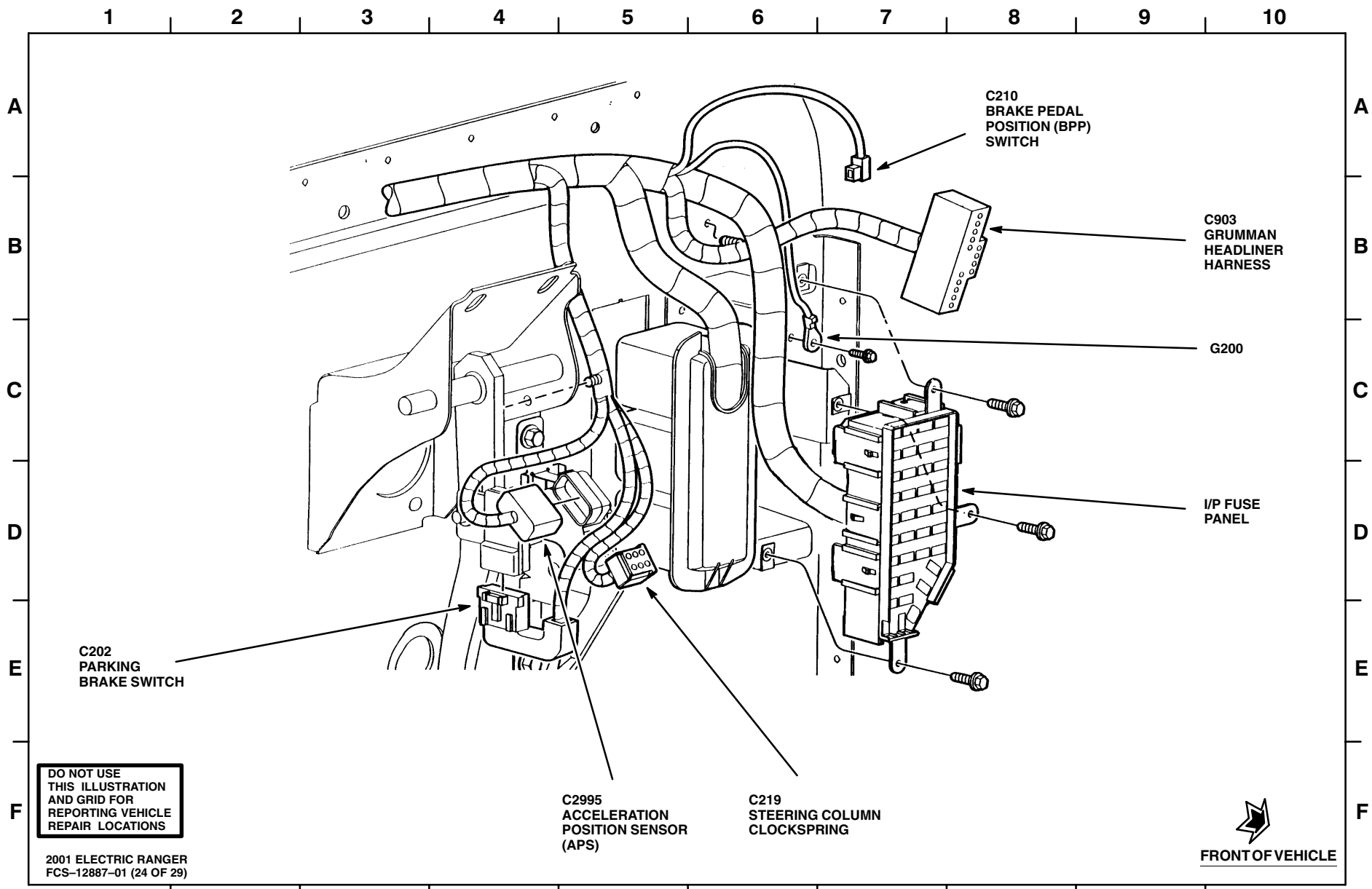
151-23 COMPONENT LOCATION VIEWS



UNDERHOOD (POSTAL 4 OF 4)

www.AUTOMOTIVEMECHANIC.ORG

COMPONENT LOCATION VIEWS 151-24

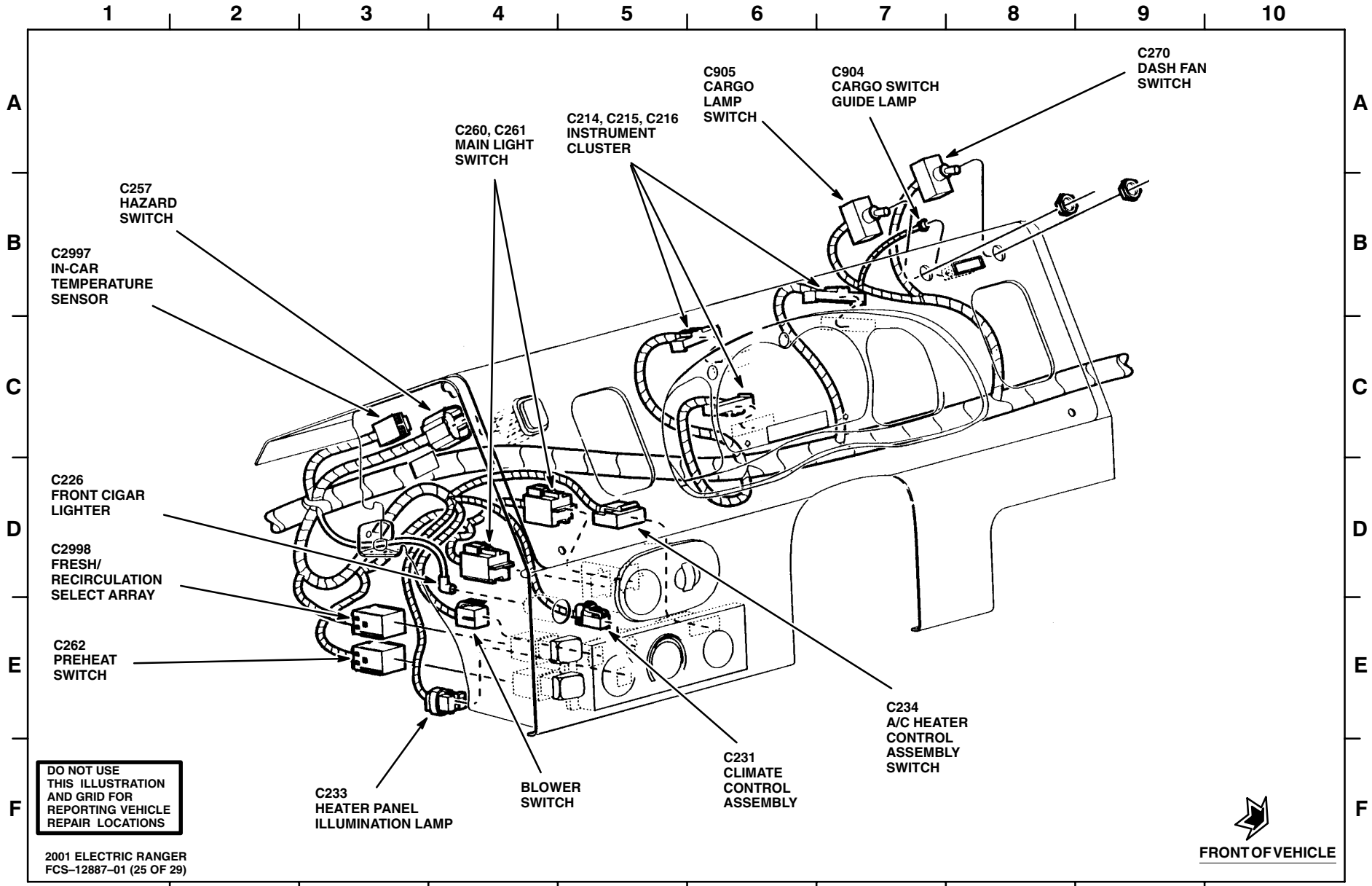


INSTRUMENT PANEL (POSTAL 1 OF 3)

www.AUTOMOTIVEMECHANIC.ORG

151-25 COMPONENT LOCATION VIEWS

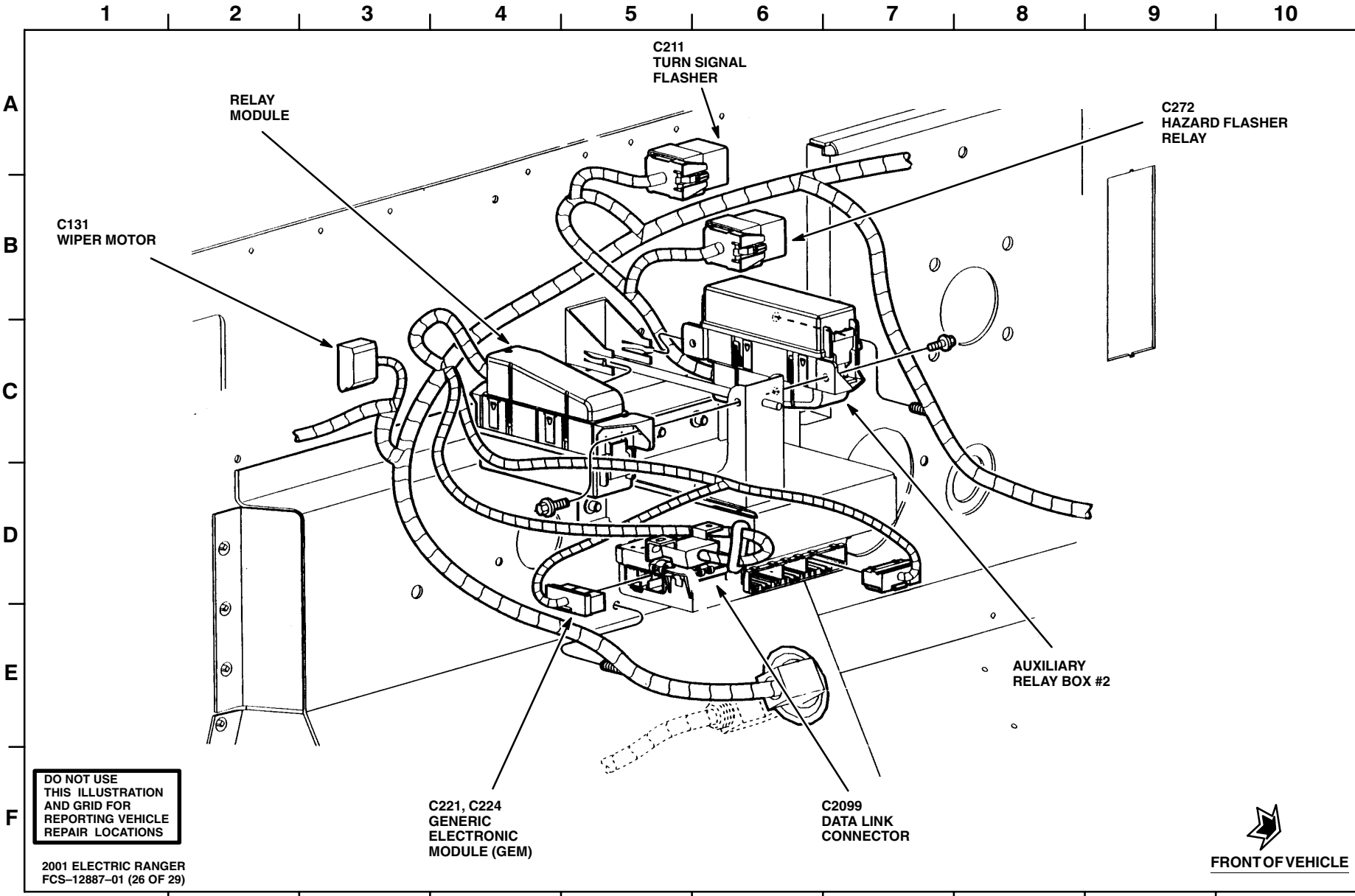
2001 RANGER ELECTRIC VEHICLE



INSTRUMENT PANEL (POSTAL 2 OF 3)

www.AUTOMOTIVEMECHANIC.org

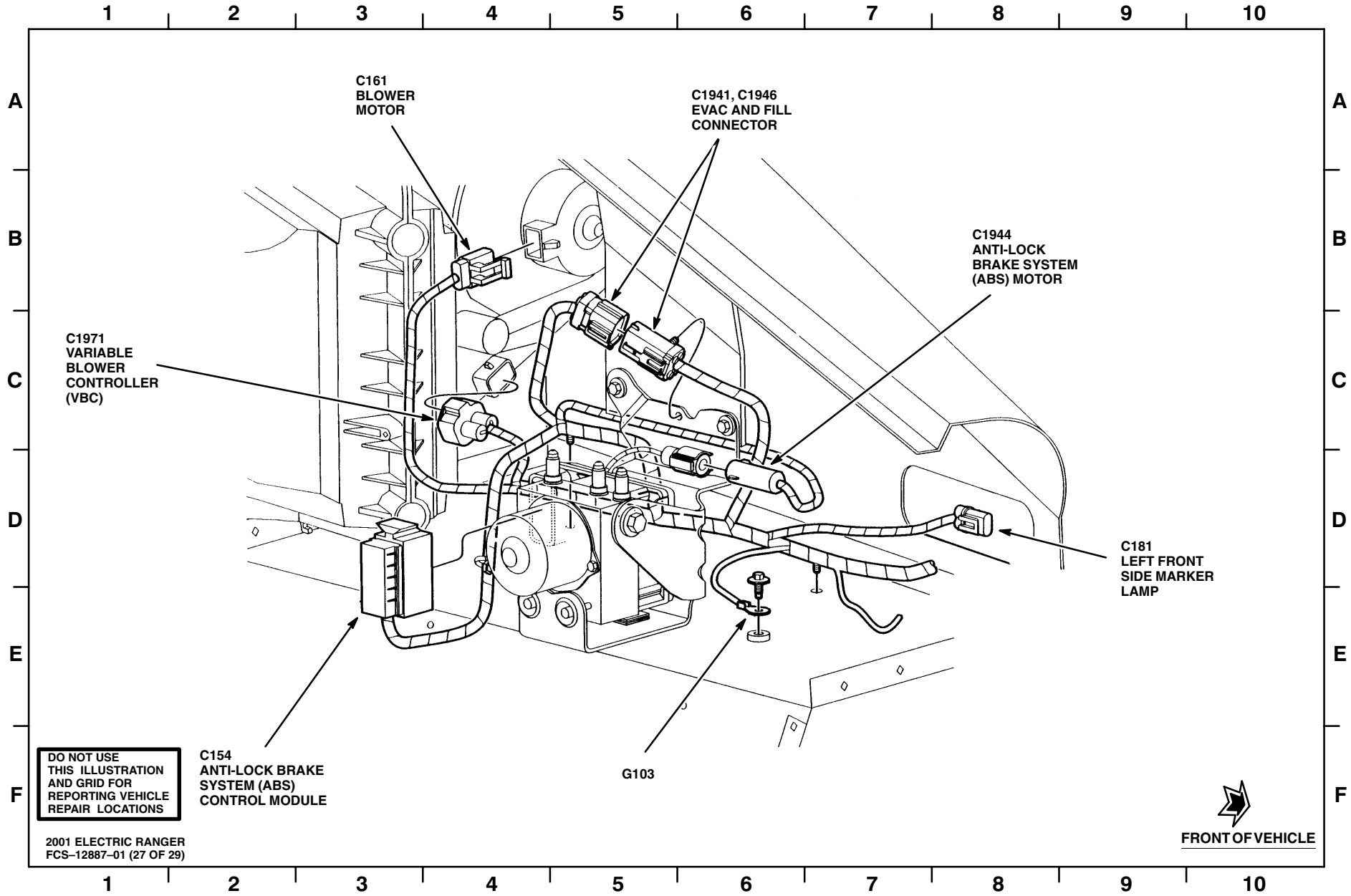
COMPONENT LOCATION VIEWS 151-26



INSTRUMENT PANEL (POSTAL 3 OF 3)

www.AUTOMOTIVEMECHANIC.ORG

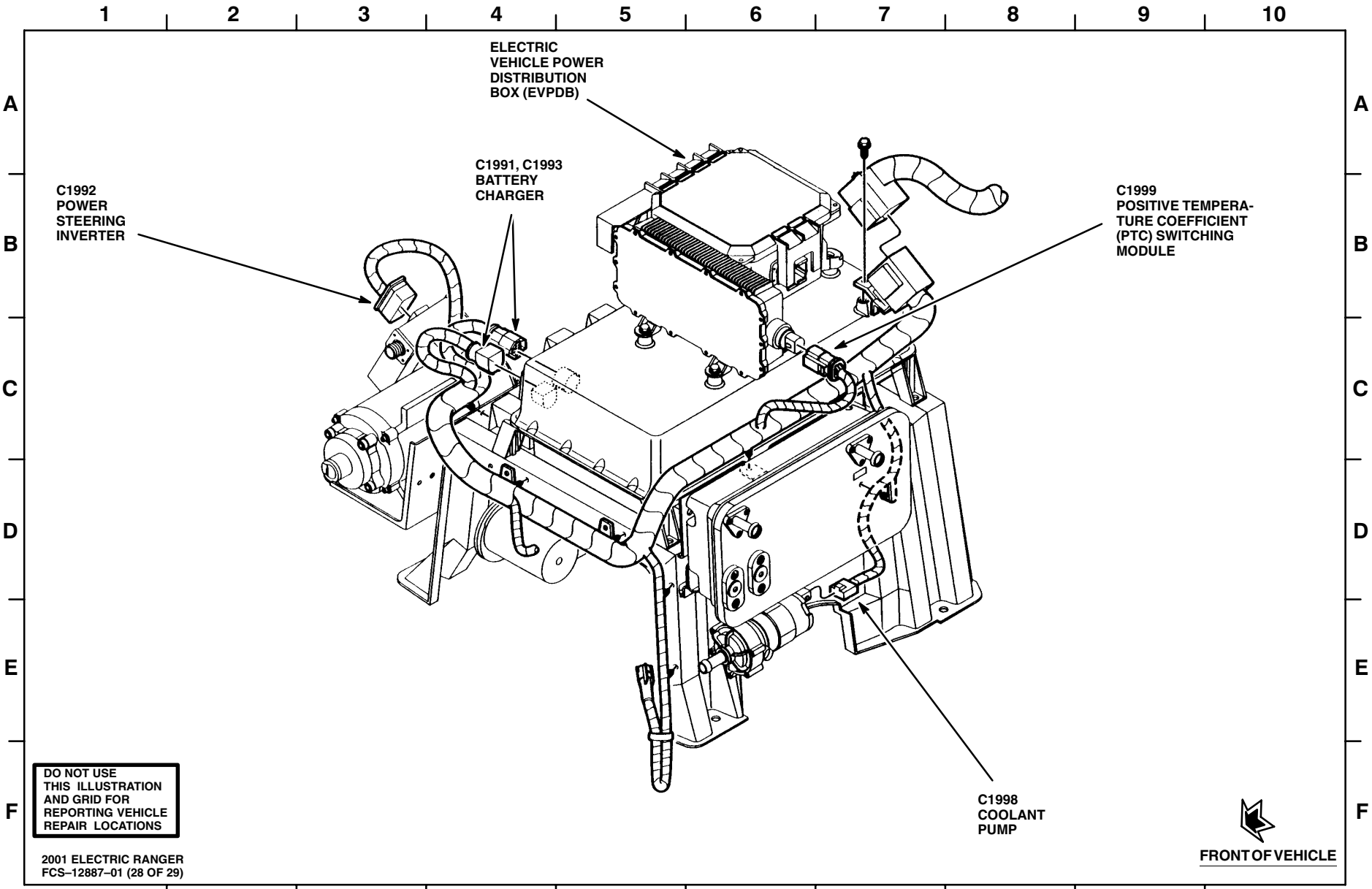
151-27 COMPONENT LOCATION VIEWS



LEFT SIDE OF UNDERHOOD (POSTAL)

www.AUTOMOTIVEMECHANIC.ORG

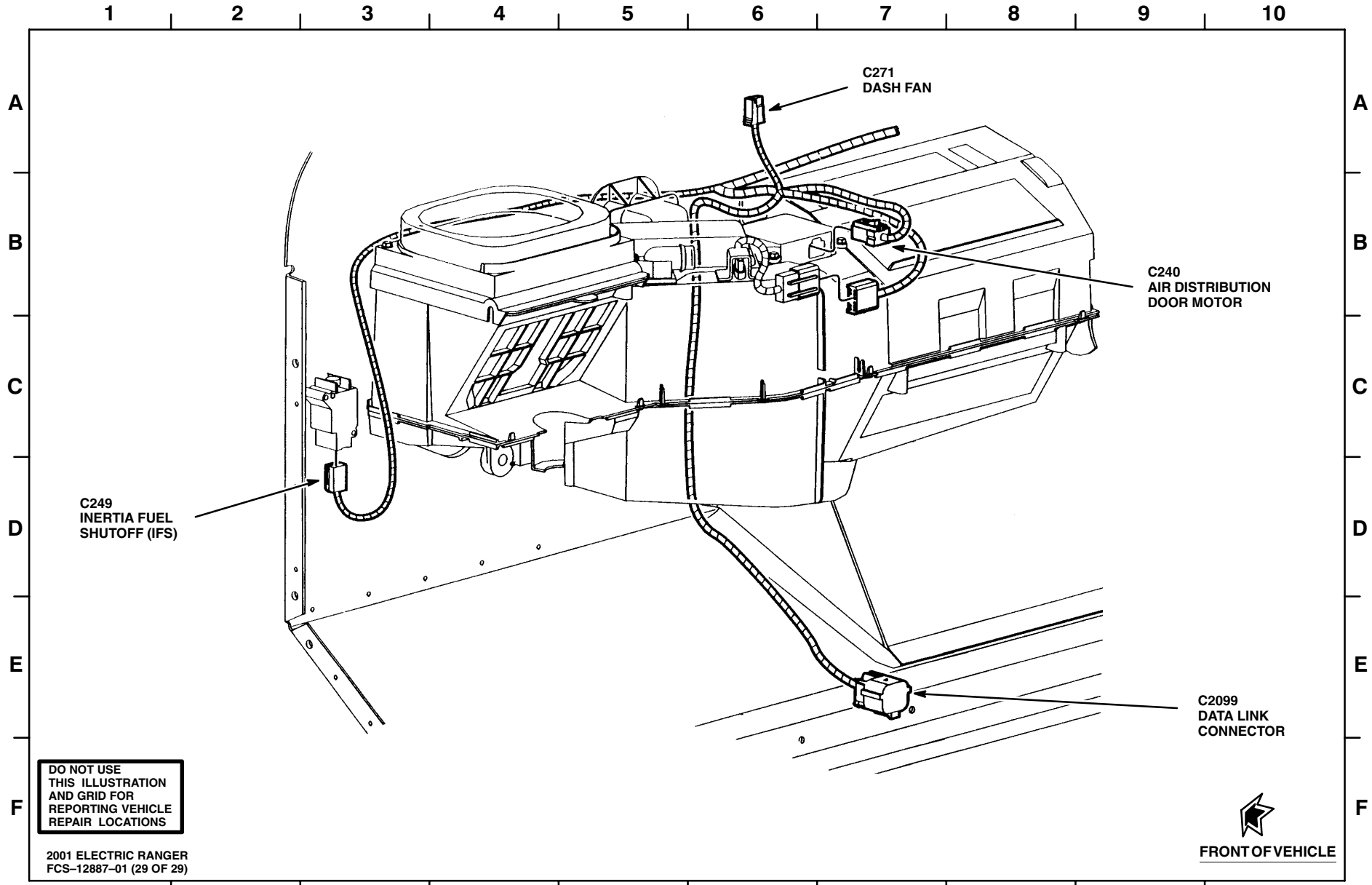
COMPONENT LOCATION VIEWS 151-28


1 2 3 4 5 6 7 8 9 10
A B C D E F
ELECTRIC VEHICLE POWER DISTRIBUTION BOX (EVPDB)
C1991, C1993 BATTERY CHARGER
C1992 POWER STEERING INVERTER
C1999 POSITIVE TEMPERATURE COEFFICIENT (PTC) SWITCHING MODULE
C1998 COOLANT PUMP
DO NOT USE THIS ILLUSTRATION AND GRID FOR REPORTING VEHICLE REPAIR LOCATIONS
2001 ELECTRIC RANGER
FCS–12887–01 (28 OF 29)
FRONT OF VEHICLE

www.AUTOMOTIVEMECHANIC.org

151-29 COMPONENT LOCATION VIEWS

2001 RANGER ELECTRIC VEHICLE



AIR DISTRIBUTION (POSTAL)

www.AUTOMOTIVEMECHANIC.ORG

www.AUTOMOTIVEMECHANIC.org

152-1 LOCATION INDEX

Component	Location	Connector	Page Zone	Connector Page
A/C Heater Control Assembly	Top RH side of I/P near top of cluster	C234	151- 25- E7	150-35
A/C Inverter Motor Controller (IMC)	In underhood compartment, on RH side of card table	C1902	151- 14- A3	150-87
A/C Inverter Motor Controller (IMC)	In underhood compartment, on RH side of card table	C1947	151- 14- A4	150-98
A/C Low Pressure Switch	Front of underhood compartment, under card table	C1973	151- 13- A2	150-105
A/C Overtemperature Sensor	Front of underhood compartment, under card table	C1995	151- 13- F5	150-116
A/C Pressure Sensor	Front of underhood compartment, on condensor	C1994	151- 14- F5	150-115
Acceleration Position Sensor (APS)	Behind LH side of I/P, near base of steering column	C2995	151- 17-E10	150-120
Acceleration Position Sensor (APS) (Postal)	Near RH cowl	C2995	151- 24- F5	150-120
Air Distribution Door Motor (Postal)	LH of I/P	C240	151- 29- B9	150-36
Ambient Temperature Sensor	Front of vehicle, behind LH side of grill	C1952	151- 13- F7	150-100
Ambient Temperature Sensor (Postal)	LH side of underhood compartment	C1952	151- 22- F6	150-100
Anti-Lock Brake System (ABS) Control Module	LH front of underhood compartment	C154	151- 1-B10	150-11
Anti-Lock Brake System (ABS) Control Module (Postal)	LH rear of engine compartment	C154	151- 27- F2	150-11
Anti-Lock Brake System (ABS) Motor	LH front of underhood compartment	C1944	151- 13-B10	150-95
Anti-Lock Brake System (ABS) Motor (Postal)	LH rear of engine compartment	C1944	151- 27- B8	150-95
Auxiliary Battery Temperature Sensor	LH front of underhood compartment, near auxiliary battery	C1953	151- 13-D10	150-100
Auxiliary Relay Box #2 (Postal)	Bottom of I/P, near steering column		151- 26- E8	★
Battery Control Module (BCM) (Lead Acid)	Inside front of traction battery pack	C1865	151- 15- A2	150-73
Battery Control Module (BCM) (Lead Acid)	Inside front of traction battery pack	C1866	151- 15- A2	150-75
Battery Control Module (BCM) (Lead Acid)	Inside front of traction battery pack	C1986	151- 15- A2	150-111
Battery Control Module (BCM) (Lead Acid)	Inside front of traction battery pack	C1987	151- 15- A2	150-112
Battery Control Module (BCM) (NiMH)	Inside front of traction battery pack	C1865	151- 18- A2	150-74
Battery Control Module (BCM) (NiMH)	Inside front of traction battery pack	C1866	151- 18- A2	150-76

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Component	Location	Connector	Page Zone	Connector Page
Battery Control Module (BCM) (NiMH)	Inside front of traction battery pack	C1986	151- 19- A3	150-111
Battery Control Module (BCM) (NiMH)	Inside front of traction battery pack	C1987	151- 19- A3	150-112
Battery Charger (Postal)	Center of underhood compartment	C1991	151- 28- B4	150-113
Battery Charger (Postal)	Center of underhood compartment	C1993	151- 28- B4	150-115
Battery Pack Blower Relay	In electric vehicle power distribution box (EVPDB)		151- 28- A4	★
Battery Temperature Sensor #1 (IOM)	Inside rear of traction battery pack, near battery module #3	C1803	151- 19- A8	150-68
Battery Temperature Sensor #2 (IOM)	Inside middle of traction battery pack, near battery module #12	C1804	151- 19- F8	150-68
Battery Temperature Sensor #3 (IOM)	Inside front of traction battery pack, near battery module #18	C1805	151- 19- A1	150-68
Battery Temperature Sensor #1 (Lead Acid)	Inside front of traction battery pack	C1988	151- 16- D1	150-113
Battery Temperature Sensor #2 (Lead Acid)	Inside rear of traction battery pack, near contactor box	C1989	151- 16-B10	150-113
Battery Pack Blower Relay	In electric vehicle power distribution box (EVPDB)		151- 28- A4	★
Battery Temperature Sensor #3 (Lead Acid)	Inside front of traction battery pack	C1981	151- 16- A3	150-106
Battery Temperature Sensor #4 (Lead Acid)	Inside middle of traction battery pack, near traction battery cooling fan	C1985	151- 15- D1	150-110
Battery Temperature Sensor #1 (NiMH)	Inside front of traction battery pack, near battery module #18	C1813	151- 19- F3	150-70
Battery Temperature Sensor #2 (NiMH)	Inside middle of traction battery pack, near battery module #12	C1814	151- 19- F7	150-70
Battery Temperature Sensor #3 (NiMH)	Inside rear of traction battery pack, near battery module #3	C1815	151- 19-A10	150-70
Battery Temperature Sensor #4 (NiMH)	Inside middle of traction battery pack, near battery module #15	C1816	151- 19- F6	150-70
Blend Door Actuator	Behind RH side of I/P	C240	151- 8- C1	150-36
Blower Motor (Postal)	LH rear of engine compartment	C161	151- 27- A3	150-14
Brake Fluid Level Switch (Postal)	RH rear of engine compartment	C137	151- 20- A2	150-7
Brake Pedal Position (BPP) Switch (Postal)	Behind RH side of I/P	C210	151- 24- A8	150-26
Bulkhead Connector (Postal)	RH side of safety wall	C134	151- 20- C2	150-4
Bulkhead Connector (Postal)	RH side of safety wall	C135	151- 20- C2	150-5
Bulkhead Connector (Postal)	RH side of safety wall	C136	151- 20- C2	150-6
Cargo Lamp Switch (Postal)	Center of I/P	C905	151- 25- A6	★

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

152-3 LOCATION INDEX

Component	Location	Connector	Page Zone	Connector Page
Cargo Switch Guide Lamp (Postal)	Center of I/P	C904	151- 25- A7	★
Charger Inlet	Front of vehicle, on RH side of grill	C1969	151- 13- F3	150-103
Charger Inlet	Front of vehicle, on RH side of grill	C5000	151-14- F4	150-130
Charger Inlet (Postal)	RH side of underhood compartment	C1969	151- 21- A8	150-103
Climate Control Assembly (Postal)	Left lower of I/P next to steering column	C231	151- 25- F6	150-34
Contactor Box	Inside rear of traction battery pack	C1864	151- 16-A10	150-72
Contactor Box	Inside rear of traction battery pack	C1982	151- 16- A9	150-107
Cooling Fan	In front of underhood compartment	C1967	151- 14- F7	150-103
Cooling Fan Relay Box (Postal)	RH side of underhood compartment	C1954, C1955	151- 21- F3	150-101
Coolant Temperature Sensor	Front LH side of underhood compartment	C1966	151- 13- F9	150-102
Coolant Pump	Under card table	C1998	151- 14- A7	150-116
Coolant Pump (Postal)	Center of underhood compartment	C1998	151- 28- F8	150-116
Dash Fan (Postal)	LH side of I/P	C271	151- 29- A7	150-45
Dash Fan Switch (Postal)	Centerof I/P	C270	151- 25- A9	150-44
Data Link Connector	Fastened to bottom of I/P, right of steering column	C209	151- 9- F6	150-25
Data Link Connector (Postal)	LH side of I/P	C2099	151- 26- F7	150-118
Daytime Running Lamps (DRL) Module	LH side of radiator support	C150	151- 4-F10	150-10
DC/DC Converter	In underhood compartment, on LH side of card table	C1943	151- 13- A9	150-95
DC/DC Temperature Sensor (Postal)	RH side of underhood compartment	C1953	151- 21- E9	150-100
Digital Transmission Range (DTR) Sensor	LH side of motor/transaxle	C4996	151- 16- F5	150-127
Econo Mode Relay	In auxillary relay box #2		151- 26- E8	★
Electric Vehicle Power Distribution Box (EVPDB) (Postal)	RH side of underhood compartment		151- 28- A4	★
EVAC and Fill Connector (Postal)	LH rear of engine compartment	C1941	151- 27- A6	150-94
EVAC and Fill Connector (Postal)	LH rear of engine compartment	C1946	151- 27- A6	150-98
EVAC and Fill Connector #1 & #2	LH side of underhood compartment, near ABS motor	C1941	151- 13-C10	150-94
EVAC and Fill Connector #1 & #2	LH side of underhood compartment, near ABS motor	C1946	151- 13-C10	150-98
Evaporator Temperature Sensor	RH side of underhood compartment, near blower motor	C1972	151- 13- C1	150-105
Fan High Speed Relay	LH side of underhood compartment, near auxiliary battery	C1955	151- 13-C10	150-101
Fan High Speed Relay (Postal)	RH side of underhood compartment, near auxiliary battery	C1955	151- 21- F3	150-101
Fan Low Speed Relay	LH side of underhood compartment, near auxiliary battery	C1954	151- 13-C10	150-101

★ Not Available

www.AUTOMOTIVE MECHANIC.ORG

Component	Location	Connector	Page Zone	Connector Page
Fan Low Speed Relay (Postal)	RH side of underhood compartment, near auxiliary battery	C1954	151- 21- F3	150-101
Flow-Through Fan	Inside front of traction battery pack	C1802	151- 19- E1	150-68
Flow-Through Fan Relay	Inside front of traction battery pack, near flow-thru fan	C1983	151- 19- F3	150-108
Fresh/Recirculation Select Switch	Behind center of I/P, on fresh/recirculation select switch	C2998	151- 17- A4	150-121
Fresh/Recirculation Select Switch (Postal)	Behind left of I/P	C2998	151- 25- D1	150-121
Front Cigar Lighter (Postal)	Behind left of I/P	C226	151- 25- D1	150-33
Generic Electronic Module (GEM)	Behind center of I/P	C221	151- 8- A7	150-31
Generic Electronic Module (GEM)	Behind center of I/P	C224	151- 8- A6	150-32
Generic Electronic Module (GEM) (Postal)	LH of I/P	C221	151- 24- F3	150-31
Generic Electronic Module (GEM) (Postal)	LH of I/P	C224	151- 26- F4	150-32
Glycol Coolant Sensor (Postal)	LH side of underhood compartment	C1966	151- 23- D2	150-102
Grumman Headliner Harness (Postal)	Near RH cowl	C903	151- 24-B10	150-59
Hazard Flasher (Postal)	Behind center of I/P	C272	151- 26- A9	150-45
Hazard Switch (Postal)	Behind center of I/P	C257	151- 25- B1	150-42
Heater Panel Illumination Lamp (Postal)	Behind left of I/P	C233	151- 25- F3	150-35
High Voltage Power Distribution Box (HVPDB)	In underhood compartment, on top center of card table	C1920	151- 13- A6	150-90
High Voltage Power Distribution Box (HVPDB)	In underhood compartment, on top center of card table	C1917	151- 13- A6	150-90
High Voltage Power Distribution Box (HVPDB)	In underhood compartment, on top center of card table	C1914	151- 13- A6	150-89
High Voltage Power Distribution Box (HVPDB)	In underhood compartment, on top center of card table	C1923	151- 13- A6	150-90
Horn (Postal)	Lower RH front of engine compartment	C144	151- 22- B1	150-7
I/P Fuse Panel (Postal)	RH side of I/P		151- 24- D9	★
Ignition Switch	Top LH side of steering column	C213	151- 8- A9	150-27
In-car Temperature Sensor	Behind center of I/P, on in-car temperature sensor	C2997	151- 17- A5	150-120
In-car Temperature Sensor (Postal)	Behind left of I/P	C2997	151- 25- B1	150-120

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

152-5 LOCATION INDEX

Component	Location	Connector	Page Zone	Connector Page
Independent Observer Module (IOM)	Inside front of traction battery pack	C1810	151- 19- F4	150-69
Inertia Fuel Shutoff (IFS) (Postal)	Below LH of I/P	C249	151- 29- D1	150-38
Instrument Cluster	Top LH side of I/P	C214, C215	151- 8- A8	150-28
Instrument Cluster	Top LH side of I/P	C216	151- 8- A8	150-29
Instrument Cluster (Postal)	Behind top RH side of I/P	C214, C215	151- 25- A5	150-28
Instrument Cluster (Postal)	Behind top RH side of I/P	C216	151- 25- A5	150-29
Interface Adapter Assembly (IAA) Module (Postal)	RH rear of underhood compartment, through safety wall	C1945	151- 20- C9	150-96
Interface Adapter Assembly (IAA) Module	RH rear of underhood compartment, through safety wall	C1945	151- 13- A4	150-96
Left Headlamp (Postal)	LH front of engine compartment	C147	151- 22- F8	150-8
Left Front Anti-Lock Brake Sensor (Postal)	LH side of underhood compartment	C1951	151- 22- C6	150-99
Left Front Park/Turn Lamp (Postal)	LH front of engine compartment	C180	151- 22-E10	150-15
Left Front Side Marker Lamp (Postal)	LH front of engine compartment	C181	151- 27- E9	150-16
Left High Beam Relay (Postal)	In auxillary relay box #2		151- 26- E8	★
Left Rear Anti-Lock Brake Sensor	At left rear wheel	C4994	151- 16- F7	150-126
Left Turn/Hazard Relay (Postal)	In auxillary relay box #2		151- 26- E8	★
Lower Battery Heater	Inside rear of traction battery pack, in front of connector box	C1863	151- 16-B10	150-71
Lower Battery Heater	Inside rear of traction battery pack, in front of connector box	C1862	151- 16-A10	150-71
Main Light Switch (Postal)	Behind center of I/P	C260, C261	151- 25- A4	150-43
Master Cylinder Pressure Sensor (Postal)	RH rear of engine compartment	C1940	151- 20- D9	150-94
Master Cylinder Pressure Sensor	LH rear of underhood compartment, on master cylinder	C1940	151- 14- B9	150-94
Motor/Transaxle	Under rear of vehicle	C4993	151- 15- F8	150-125
Oil Pressure Switch	LH side of motor/transaxle	C4997	151- 15- F7	150-127
Oil Pump	On LH side of motor/transaxle	C4992	151- 15- F5	150-125
Oil Pump Relay	In I/P relay center box		151- 26- A2	★
Oil Pump Relay (Postal)	In relay module		151- 26- A2	★
Parking Brake Switch (Postal)	Near RH cowl	C202	151- 24- E1	150-22
Passive Air Bag Deactivation (PAD) Switch	Behind center of I/P	C256	151- 17- F5	150-42

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Component	Location	Connector	Page Zone	Connector Page
Positive Temperature Coefficient (PTC) Switching Module	In underhood compartment, in front of high voltage power distribution box (HVPDB)	C1999	151- 13- A7	150-117
Positive Temperature Coefficient (PTC) Switching Module	In underhood compartment, in front of high voltage power distribution box (HVPDB)	C1912	151- 14- A5	150-89
Positive Temperature Coefficient (PTC) Switching Module (Postal)	Center of underhood compartment	C1999	151- 28- B9	150-117
Power Steering Assembly	RH side of underhood compartment, near traction battery charger	C1895	151- 13- D1	150-90
Power Steering Assembly	RH side of underhood compartment, near traction batter charger	C1992	151- 13- A3	150-114
Power Steering Inverter (Postal)	Center of underhood compartment	C1992	151- 28- B1	150-114
Power Steering Relay (Postal)	In relay module		151- 26- A2	★
Preheat Ignition Relay (Postal)	In relay module		151- 15- F5	★
Preheat Inverter Relay (Postal)	In relay module		151- 26- A2	★
Preheat Switch (Postal)	Behind center of I/P	C262	151- 25- E1	150-44
Radiator Cooling Fan (Postal)	Center of underhood compartment	C1967	151- 23-E10	150-103
Radio	Center of I/P	C228	151- 9- A3	150-33
Rear Hazard Only Relay (Postal)	In auxillary relay box #2		151- 26- E8	★
Recirculating Fan	Inside middle of traction battery pack	C1801	151- 19- A4	150-67
Recirculating Fan Relay	Inside middle of traction battery pack, near recirculating fan	C2038	151- 19- F5	150-117
Recirculation Vacuum Solenoid	Behind center of I/P	C2994	151- 17- B1	150-120
Recirculation Vacuum Pressure Switch	Behind center of I/P	C2993	151- 17- B1	150-119
Relay Module (Postal)	Bottom of I/P, near steering column		151- 26- A2	★
Repeater Isolation Relay (Postal)	In auxillary relay box #2		151- 26- E8	★
Right Turn/Hazard Relay	In auxillary relay box #2		151- 26- E8	★
Right Headlamp (Postal)	RH front of engine compartment	C155	151- 22- F4	150-12
Right Front Anti-Lock Brake Sensor (Postal)	RH front of engine compartment	C1970	151- 22- A5	150-104
Right Front Park/Turn Lamp (Postal)	RH front of engine compartment	C182	151- 22- F5	150-17

★ Not Available

www.AUTOMOTIVEMECHANIC.org

152-7 LOCATION INDEX

Component	Location	Connector	Page Zone	Connector Page
Right Front Side Marker Lamp (Postal)	RH front of engine compartment	C183	151- 20- E9	150-18
Right High Beam Relay (Postal)	In auxillary relay box #2		151- 26- E8	★
Right Rear Anti-Lock Brake Sensor	At right rear wheel	C4995	151- 16-C10	150-126
Steering Column Clockspring (Postal)	Near RH cowl	C219	151- 24- F6	150-30
Steering Wheel Sensor	Lower part of steering column	C2990	151- 17-D10	150-119
Traction Battery (Postal)	RH side of traction battery case	C1939	151- 28- B5	150-93
Traction Battery Charger	In underhood compartment, top of card table	C1993	151- 13- E1	150-115
Traction Battery Charger	In underhood compartment, top of card table	C1991	151- 13- E2	150-113
Traction Battery Charger	In underhood compartment, top of card table	C1938	151- 13- F2	★
Traction Battery Cooling Fan (Lead Acid)	Inside rear of traction battery pack	C1984	151- 16- A5	150-109
Traction Battery Cooling Fan Relay (Lead Acid)	Inside traction battery pack, near traction battery cooling fan	C1983	151- 16- E1	150-108
Traction Inverter Module (TIM)	Under rear of vehicle	C4998	151- 15- F9	150-128
Traction Inverter Module (TIM)	Under rear of vehicle	C4999	151- 15- F9	150-129
Turn Signal Flasher (Postal)	Bottom center of I/P	C211	151- 26- A5	150-26
Upper Battery Heater	Inside front of traction battery pack	C1859	151- 16- C1	150-71
Upper Battery Heater	Inside rear of traction battery pack	C1861	151- 16-E10	150-71
Vacuum Pressure Sensor	In underhood compartment, under card table	C1997	151- 13- F4	150-116
Vacuum Pump	In underhead compartment, under card table	C1996	151- 13- F6	150-116
Variable Blower Controller (VBC)	RH side of underhood compartment, near blower motor	C1971	151- 13- B1	150-104
Variable Blower Controller (VBC) (Postal)	LH side of underhood compartment	C1971	151- 27- C1	150-104
Windshield Washer Pump (Postal)	LH rear of engine compartment	C164	151- 23- A1	150-14
Windshield Wiper Relay (Postal)	In relay module		151- 26- A2	★
Wiper Motor (Postal)	LH of I/P	C131	151- 26- B1	150-3

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Connector	Location	Page Zone	Connector Page	Color	Terminal
C124	Rear of underhood compartment, near high voltage power distribution box (HVPDB)	151- 4- F5	150-1, 150-2		42
C131 (Postal)	LH of I/P, on wiper motor	151- 26- B1	150-3		4
C134	LH side of safety wall	151- 4- A9	150-4		40
C134 (Postal)	RH side of safety wall	151- 20- C2	150-4	BK	40
C135	LH side of safety wall	151- 4- A9	150-5		40
C135 (Postal)	RH side of safety wall	151- 20- C2	150-5	BN	40
C136	LH side of safety wall	151- 4- A9	150-6		40
C136 (Postal)	RH side of safety wall	151- 20- C2	150-6	GY	40
C137 (Postal)	RH rear of engine compartment, on brake fluid level switch	151- 20- A2	150-7		3
C144 (Postal)	Lower RH front of engine compartment, on horn	151- 22- B1	150-7		1
C147 (Postal)	LH front of engine compartment, on left headlamp	151- 22- F8	150-8		3
C148	LH front of engine compartment, on left turn lamp	★	150-9		3
C150	Near LH side of lower radiator support, on daytime running lamp (DRL) module	151- 4-F10	150-10		8
C151	LH inner fender well, on left front caliper bracket	★	150-10		2
C154	LH side of underhood compartment, on anti-lock brake system (ABS) control module	151- 4-C10	150-11	BK	25
C154 (Postal)	LH rear of engine compartment, on anti-lock brake system (ABS) control module	151- 27- F2	150-11		25
C155 (Postal)	RH front of engine compartment, on right headlamp	151- 22- F4	150-12		3
C156	RH front of engine compartment, on right turn lamp	★	150-13		3
C158	RH inner fender well, on right front caliper bracket	★	150-14		2
C161 (Postal)	LH rear of engine compartment, on blower motor	151- 27- A3	150-14		2
C164 (Postal)	LH rear of engine compartment, on windshield washer pump	151- 23- A1	150-14		2
C180 (Postal)	LH front of engine compartment, on left front park/turn lamp	151- 22- E9	150-15		3
C181 (Postal)	LH front of engine compartment, on left front side marker lamp	151- 27- D9	150-16		3
C182 (Postal)	RH front of engine compartment, on right front park/turn lamp	151- 22- F5	150-17		3
C183 (Postal)	RH front of engine compartment, on right front side marker lamp	151- 20- F9	150-18		3
C200	Behind LH cowl panel	151- 11- C1	150-19		16

★ Not Available

www.AUTOMOTIVE MECHANIC.ORG

152-9 LOCATION INDEX

Connector	Location	Page Zone	Connector Page	Color	Terminal
C201	Behind LH side of I/P	151- 9-E10	150-20		84
C202 (Postal)	Near RH cowl, on parking brake switch	151- 24- E1	150-22		1
C203	LH front door, on master window control switch	★	150-22		4
C204	LH of I/P, on top side of steering column	★	150-23		4
C205	LH of I/P, on top side of steering column	★	150-23		11
C208	Lower LH side of steering column	151- 9- F7	150-24		16
C209 Data Link Connector	Fastened to bottom of I/P, near steering column	151- 9- F6	150-25		16
C210 (Postal)	Behind RH side of I/P, on brake pedal position (BPP) switch	151- 24- A8	150-26		5
C211 (Postal)	Bottom center I/P, on turn signal flasher	151- 26- A5	150-26		5
C212	Under steering column, on brake pedal	★	150-27		3
C213	LH side of steering column, on ignition switch	151- 8- A9	150-27		15
C214	Behind top LH side of I/P, on rear of instrument cluster	151- 8- A8	150-28		16
C214 (Postal)	Behind top RH side of I/P, on rear of instrument cluster	151- 25- A5	150-28	WH	16
C215	Behind top LH side of I/P, on rear of instrument cluster	151- 8- A8	150-28		12
C215 (Postal)	Behind top RH side of I/P, on rear of instrument cluster	151- 25- A5	150-28	BK	12
C216	Behind top LH side of I/P, on rear of instrument cluster	151- 8- A8	150-29		10
C216 (Postal)	Behind top RH side of I/P, on rear of instrument cluster	151- 25- A5	150-29	WH	10
C218	LH side of instrument panel, on steering wheel clockspring	★	150-29		3
C219 (Postal)	Near RH cowl, on steering column clockspring	151- 24- F4	150-30		6
C221	Behind center of I/P, on generic electronic module (GEM)	151- 8- A7	150-31		26
C221 (Postal)	LH of I/P, on generic electronic module (GEM)	151- 26- F4	150-31		20
C224	Behind center of I/P, on generic electronic module (GEM)	151- 8- AC	150-32		18
C224 (Postal)	LH of I/P, on generic electronic module (GEM)	151- 26- F4	150-32		20
C226 (Postal)	Behind left of I/P, on front cigar lighter	151- 25- D1	150-33		1
C227	Center of I/P, on cigar lighter	★	150-33		1
C228	Behind center of I/P, on rear of radio	151- 9- A3	150-33		16
C231 (Postal)	Behind left of I/P, on cabin temperature adjust	151- 25- F6	150-34		3
C232	Center of I/P, on climate control switch	★	150-34		4
C233 (Postal)	Behind left of I/P, on heater panel illumination lamp	151- 29- F3	150-35		8
C234 (Postal)	Behind left of I/P, A/C-heater control assembly	151- 25- E7	150-35		4
C235	Center of I/P, on cigar lighter	★	150-36		2

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Connector	Location	Page Zone	Connector Page	Color	Terminal
C239	Bottom center of I/P, on accessory delay relay	★	150-36		5
C240	On blend door actuator	151- 8- C1	150-36		8
C240 (Postal)	LH side of I/P, on air distribution door motor	151- 29- B9	150-37		8
C242	RH top of I/P, on air bag module	★	150-37		3
C249 (Postal)	Below LH of I/P, on inertia fuel shutoff (IFS)	151- 29- D1	150-38		3
C250	LH center of I/P, on diagnostic module	★	150-39		26
C252	Behind RH cowl panel	151- 8- C1	150-40		16
C253	LH top of I/P, on multifunction switch	★	150-41		10
C254	LH top of I/P, on multifunction switch	★	150-41		7
C256	Behind center of I/P	151- 17- F5	150-42		6
C257 (Postal)	Behind center of I/P, on hazard switch	151- 25- B1	150-42		8
C260 (Postal)	Behind center of I/P, on main light switch	151- 25- A4	150-43		7
C261 (Postal)	Behind center of I/P, on main light switch	151- 25- A4	150-43		7
C262 (Postal)	Behind center of I/P, on preheat switch	151- 25- E1	150-44		6
C270 (Postal)	Center of I/P, on dash fan switch	151- 25- A9	150-44		6
C271 (Postal)	LH side of I/P, on dash fan	151- 29- A7	150-45		2
C272	Bottom center of I/P, on hazard flasher	★	150-45		5
C303	Behind left hand door, on safety belt	★	150-6		4
C400	LH rear of vehicle, on left park/stop lamp	★	150-6		3
C401	LH rear of vehicle, on left backup lamp	★	150-7		3
C402	LH rear of vehicle, on left turn lamp	★	150-7		3
C403	Center LH of trunk, on back lights	★	150-8		8
C404 (Postal)	Behind center of I/P, on hazard flasher	151- 26- A9	150-48		5
C405	RH rear of vehicle, on right backup lamps	★	150-49		3
C406	RH rear of vehicle, on right turn lamps	★	150-49		3
C407	Top LH rear of back seat, on speaker	★	150-49		2
C408	Top RH rear of back seat, on speaker	★	150-49		2
C409	Under rear of vehicle, near motor/transaxle (NOT USED)	151- 16- F9	150-50		4
C411	Rear of vehicle, on left center license plate lamp	★	150-50		2
C412	Rear of vehicle, on right center license plate lamp	★	150-50		2
C500	Outside center front of LH door, on rear view mirror	★	150-51		3

★ Not Available

www.AUTOMOTIVEMECHANIC.org

152-11 LOCATION INDEX

Connector	Location	Page Zone	Connector Page	Color	Terminal
C501	RH top of I/P, on right speaker	★	150-51		2
C502	LF door, on window control switch	★	150-52		6
C503	LF door, on door lock switch	★	150-52		5
C504	LF door, on power window motor	★	150-53		2
C505	LF door, on door lock actuator	★	150-53		2
C506	LF of I/P, on door jamb	★	150-54		2
C509	LF door, on rear view mirror switch	★	150-54		8
C600	Center of I/P, on right rear view mirror switch	★	150-55		3
C601	RF door, on right front speaker	★	150-55		2
C602	RF door, on right front window switch	★	150-56		5
C603	RF door, on right door lock switch	★	150-56		5
C604	RF door, on power window motor	★	150-57		2
C606	RF of I/P, on right door jamb	★	150-57		2
C900	Top rear center of headliner, on stop lamp	★	150-58		3
C901	Top center of headliner, on map lamp	★	150-58		1
C902	LF of headliner, on map lamp	★	150-58		1
C903 (Postal)	Near RH cowl, on grumman headliner harness	151- 24-B10	150-59		15
C904 (Postal)	Center of I/P, on cargo lamp switch	151- 25- A7	★		3
C905 (Postal)	Center of I/P, on cargo switch guide lamp	151- 25- A6	★		2
C1747 (NiMH)	Inside traction battery, near label N	151- 18- A8	150-60		6
C1748 (NiMH)	Inside traction battery, near label M	151- 18- A6	150-60		6
C1749 (NiMH)	Inside traction battery, near label L	151- 18- A4	150-61		6
C1750 (NiMH)	Inside traction battery, near label A	151- 18- A7	150-61		6
C1751 (NiMH)	Inside traction battery, near label B	151- 18-A10	150-62		6
C1752 (NiMH)	Inside traction battery, near label C	151- 18- A9	150-62		6
C1753 (NiMH)	Inside traction battery, near label D	151- 18- F9	150-63		6
C1754 (NiMH)	Inside traction battery, near label E	151- 18- F8	150-63		6
C1755 (NiMH)	Inside traction battery, near label F	151- 18- F6	150-64		6
C1756 (NiMH)	Inside traction battery, near label G	151- 18- A5	150-64		6
C1757 (NiMH)	Inside traction battery, near label H	151- 18- F5	150-65		1
C1758 (NiMH)	Inside traction battery, near label J	151- 18- F3	150-65		6

★ Not Available

www.AUTOMOTIVEMECHANIC.org

Connector	Location	Page Zone	Connector Page	Color	Terminal
C1759 (NiMH)	Inside traction battery, near label K	151- 18- A1	150-66		6
C1801 (NiMH)	Inside middle of traction battery, on recirculating fan	151- 19- A4	150-67		3
C1802 (NiMH)	Inside front of traction battery, on flow-thru fan	151- 19- E1	150-68		3
C1803 (NiMH)	Inside rear of traction battery, on battery temperature sensor #1 (IOM)	151- 19- A8	150-68		2
C1804 (NiMH)	Inside middle of traction battery, on battery temperature sensor #2 (IOM)	151- 19- F8	150-68		2
C1805 (NiMH)	Inside front of traction battery, on battery temperature sensor #3 (IOM)	151- 19- A1	150-68		2
C1810 (NiMH)	Inside front of traction battery, on independent observer module (IOM)	151- 19- F4	150-69		40
C1813 (NiMH)	Inside front of traction battery, on battery temperature sensor #1	151- 19- F3	150-70		2
C1814 (NiMH)	Inside middle of traction battery, on battery temperature sensor #2	151- 19- F7	150-70		2
C1815 (NiMH)	Inside rear of traction battery, on battery temperature sensor #3	151- 19-A10	150-70		2
C1816 (NiMH)	Inside middle of traction battery, on battery temperature sensor #4	151- 19- F6	150-70		2
C1859 (Lead Acid)	Inside front of traction battery, on upper battery heater	151- 16- C1	150-71		2
C1861 (Lead Acid)	Inside rear of traction battery, on upper battery heater	151- 16-E10	150-71		2
C1862 (Lead Acid)	Inside rear of traction battery, on lower battery heater	151- 16-A10	150-71		1
C1863 (Lead Acid)	Inside rear of traction battery, on lower battery heater	151- 16-B10	150-71		2
C1864 (Lead Acid)	Inside rear of traction battery, on contactor box	151- 16-A10	150-72		6
C1865 (Lead Acid)	Inside front of traction battery, on battery control module (BCM)	151- 15- A2	150-73		24
C1865 (NiMH)	Inside front of traction battery, on battery control module (BCM)	151- 18- A2	150-74		24
C1866 (Lead Acid)	Inside front of traction battery, on battery control module (BCM)	151- 15- A2	150-75		40
C1866 (NiMH)	Inside front of tracton battery, on battery control module (BCM)	151- 18- A2	150-76		40
C1867 (Lead Acid)	Inside traction battery, near label P	151- 16- A2	150-77		1
C1868 (Lead Acid)	Inside traction battery, near label M	151- 15- A9	150-77		6
C1869 (Lead Acid)	Inside traction battery, near label F	151- 15- A4	150-78		6

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

152-13 LOCATION INDEX

Connector	Location	Page Zone	Connector Page	Color	Terminal
C1870 (Lead Acid)	Inside traction battery, near label N	151- 15- A4	150-78		6
C1871 (Lead Acid)	Inside traction battery, near label E	151- 16- A4	150-79		1
C1872 (Lead Acid)	Inside traction battery, near label K	151- 15- A6	150-79		1
C1873 (Lead Acid)	Inside traction battery, near label L	151- 15- A5	150-80		6
C1874 (Lead Acid)	Inside traction battery, near label J	151- 16- F3	150-80		6
C1875 (Lead Acid)	Inside traction battery, near label S	151- 16- A6	150-81		6
C1876 (Lead Acid)	Inside traction battery, near label B	151- 16- A6	150-81		6
C1877 (Lead Acid)	Inside traction battery, near label H	151- 15- A6	150-82		6
C1878 (Lead Acid)	Inside traction battery, near label T	151- 15- A7	150-82		6
C1879 (Lead Acid)	Inside traction battery, near label G	151- 15- A8	150-83		6
C1880 (Lead Acid)	Inside traction battery, near label D	151- 16- F4	150-83		1
C1881 (Lead Acid)	Inside traction battery, near label C	151- 15- A7	150-84		1
C1882 (Lead Acid)	Inside traction battery, near label R	151- 15- A8	150-84		6
C1884 (Lead Acid)	Inside traction battery, near label A	151- 16- A8	150-85		6
C1885 (Lead Acid)	Inside traction battery, near label W	151- 16- A2	150-85		6
C1886 (Lead Acid)	Inside traction battery, near label U	151- 15- A9	150-86		6
C1887 (Lead Acid)	Inside traction battery, near label V	151- 15- F4	150-86		1
C1895	RH side of underhood compartment, on power steering controller assembly	151- 13- D1	150-90		4
C1902	In underhood compartment, on A/C inverter motor controller	151- 14- A4	150-87		6
C1903	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-88		1
C1904	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-88		1
C1905	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-88		1
C1906	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-88		1
C1912	Top of card table, on positive temperature coefficient (PTC) switching module	151- 14- A5	150-89		4

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Connector	Location	Page Zone	Connector Page	Color	Terminal
C1914	Top of card table, on left side of high voltage power distribution box (HVPDB)	151- 13- A6	150-89	BK	4
C1917	Top of card table, on right side of high voltage power distribution box (HVPDB)	151- 13- A6	150-90	BK	4
C1920	Top at card table, on right side of high voltage power distribution box (HVPDB)	151- 3- A6	150-90	BK	4
C1923	Top of card table, on right side of high voltage power distribution box (HVPDB)	151- 13- A6	150-90	BK	4
C1931	In high voltage power distribution box (HVPDB), on interlock switch	151- 14- A6	150-91		1
C1932	Inside high voltage power distribution box (HVPDB)	151- 14- A6	150-91		1
C1933	Inside high voltage power distribution box (HVPDB)	151- 14- A6	150-91		1
C1935	On RH side of traction battery case	151- 16- A1	150-92		4
C1938	In underhood compartment, on traction battery charger	151- 13- F2	★	BK	4
C1939	On LH side of traction battery case	151- 15- C1	150-93	BK	76
C1939 (Postal)	On RH side of traction battery case	151- 28- B5	150-93		76
C1940	LH side of underhood compartment, on master cylinder	151- 14- B9	150-94	BK	4
C1940 (Postal)	RH rear of engine compartment, on master cylinder pressure sensor	151- 20- D9	150-94		4
C1941	Upper LH fender apron, near anti-lock brake system (ABS) control module, on EVAC and fill connector #2	151- 13-C10	150-94		12
C1941 (Postal)	LH rear of engine compartment, on EVAC and fill connector	151- 27- A6	150-94		12
C1943	Top LH side of card table in underhood compartment, on DC/DC converter	151- 13- A9	150-95	WH	10
C1944	LH side of underhood compartment, to anti-lock brake system (ABS) motor	151- 13-B10	150-95		2
C1944 (Postal)	LH rear of engine compartment, on anti-lock brake system (ABS) motor	151- 27- B8	150-95		2
C1945	Top RH side of safety wall, to interface adapter assembly (IAA) module	151- 13- A4	150-96		104
C1945 (Postal)	Rear center of safety wall, to interface adapter assembly (IAA) module	151- 20- C9	150-96		12

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

152-15 LOCATION INDEX

Connector	Location	Page Zone	Connector Page	Color	Terminal
C1946	Upper LH fender apron, near anti-lock brake system (ABS) control module on EVAC and fill connector #1	151- 13-C10	150-98		12
C1946 (Postal)	LH rear of engine compartment, on EVAC and fill connector	151- 27- A6	150-98		104
C1947	Top of card table, on A/C inverter motor controller (IMC)	151- 14- A4	150-98		10
C1948	Top rear of underhood compartment	151- 14- A6	150-99	BK	2
C1950	LH front of vehicle, on left crash sensor	★	150-99		4
C1951 (Postal)	LH side of underhood compartment, near radiator	151- 22- C6	150-99		2
C1952	Left front of vehicle behind grill, on ambient temperature sensor	151- 13- F7	150-100		2
C1952 (Postal)	LH side of underhood compartment, near radiator	151- 22- F6	150-100		2
C1953	RH side of auxiliary battery tray, on auxiliary battery temperature sensor	151- 13-D10	150-100		2
C1953 (Postal)	RH side of underhood compartment, near auxiliary battery tray, on DC/DC temperature sensor	151- 21- E9	150-100		2
C1954	LH side of underhood compartment, near auxiliary battery tray, on fan low speed relay	151- 13-C10	150-101		5
C1954 (Postal)	RH side of underhood compartment, near auxiliary battery tray, on fan low speed relay	151- 21- F3	150-101		5
C1955	LH side of underhood compartment, near auxiliary battery tray, on fan high speed relay	151- 13-C10	150-101		5
C1955 (Postal)	RH side of underhood compartment, near auxiliary battery tray, on fan high speed relay	151- 21- F3	150-101		5
C1966	LH side of underhood compartment, on coolant temperature sensor	151- 13- F9	150-102	GY	2
C1966 (Postal)	LH side of underhood compartment, on glycol coolant sensor	151- 23- D2	150-102		2
C1967	Front of underhood compartment, on cooling fan	151- 14- F7	150-103	BK	3
C1967 (Postal)	Center of underhood compartment, on radiator cooling fan	151- 23-E10	150-103		3
C1968	Front center of underhood, on radiator cooling fan	★	150-103		3
C1969	Front of vehicle in grill, on charger inlet	151- 13- F3	150-103		4
C1969 (Postal)	RH side of underhood compartment, near auxiliary battery tray	151- 21- A8	150-103		4
C1970 (Postal)	RH front of engine compartment, on right front wheel sensor	151- 22- A5	150-104		2
C1971	RH side of underhood compartment, on variable blower controller	151- 13- B1	150-104		5
C1971 (Postal)	RH side of engine compartment, on variable blower controller	151- 27- C1	150-104		5

★ Not Available

www.AUTOMOTIVEMECHANIC.ORG

Connector	Location	Page Zone	Connector Page	Color	Terminal
C1972	RH rear of underhood compartment, on evaporator temperature sensor	151- 13- C1	150-105		2
C1973	RH rear of underhood compartment, on A/C low pressure switch	151- 13- A2	150-105		4
C1980	Inside traction battery, near contactor box	151- 16-C10	150-106		2
C1981	Inside front of traction battery, on battery temperature sensor #3	151- 16- A3	150-106		2
C1982	Inside rear of traction battery, on contactor box	151- 16- A9	150-107		23
C1983 (Lead Acid)	Inside middle of traction battery, traction battery cooling fan relay	151- 16- E1	150-108		5
C1983 (NiMH)	Inside front of traction battery, on flow-thru fan relay	151- 19- F3	150-108		★
C1984	Inside middle of traction battery, on traction battery cooling fan	151- 16- A5	150-109		7
C1985	Inside rear of traction battery, on battery temperature sensor #4	151- 15- D1	150-110		2
C1986	Inside front of traction battery, on battery control module	151- 15- A2	150-111		40
C1987	Inside front of traction battery, on battery control module	151- 15- A2	150- 112		24
C1988	Inside front of traction battery, on battery temperature sensor #1	151- 16- D1	150-113		2
C1989	Inside rear of traction battery, on battery temperature sensor #2	151- 16-B10	150-113		2
C1991	Top of card table, on RH side of battery charger	151- 13- E2	150-113	GY	6
C1991 (Postal)	Center of underhood compartment, on battery charger	151- 28- B4	150-113		6
C1992	RH side of card table, on power steering controller assembly	151- 13- A3	150-114	YE	22
C1992	Center of underhood compartment, on power steering inverter	151- 28- B1	150-114		22
C1993	Top of card table, on RH side of traction battery charger	151- 13- E1	150-115	WH	10
C1993 (Postal)	Center of underhood compartment, on battery charger	151- 28- B4	150-115		10
C1994	Under card table, on A/C pressure sensor	151- 14- F5	150-115	BK	4
C1995	Under card table, on A/C overtemperature sensor	151- 13- F5	150-116		2
C1996	Under card table, on vacuum pump	151- 13- F6	150-116		2
C1997	Under card table, on vacuum pressure sensor	151- 13- F4	150-116		3
C1998	Under card table, on coolant pump	151- 14- A7	150-116		2
C1998 (Postal)	Center of underhood compartment, on coolant pump	151- 28- F8	150-116		2
C1999	Top of card table, on positive temperature coefficient (PTC) switching module	151- 13- A7	150-117		10
C1999 (Postal)	Center of underhood compartment, on positive temperature coefficient (PTC) switching module	151- 28- B9	150-117		10
C2038	Inside middle of traction battery, on recirculating fan relay	151- 19- F5	150-117		★

★ Not Available

www.AUTOMOTIVEMECHANIC.org

152-17 LOCATION INDEX

Connector	Location	Page Zone	Connector Page	Color	Terminal
C2099 (Postal)	LH of I/P, on data link connector	151- 26- F7	150-118		16
C2990	Lower steering column, on steering wheel sensor	151- 17-D10	150-119		4
C2991	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-119		1
C2992	Top of card table, on positive temperature coefficient (PTC) switching module	★	150-119		1
C2993	Behind center of I/P, on recirculation vacuum pressure switch	151- 17- B1	150-119		3
C2994	Behind center of I/P, on recirculation vacuum solenoid	151- 17- B1	150-120		2
C2995	Behind LH side of I/P, on acceleration position sensor (APS)	151- 17-E10	150-120		10
C2995 (Postal)	Near RH cowl, on acceleration position sensor (APS)	151- 24- F3	150-120		10
C2997	Behind center of I/P, on in-car temperature sensor	151- 17- A5	150-120		2
C2997 (Postal)	Behind left of I/P, on in-car temperature sensor	151- 25- B1	150-120		2
C2998	Behind center of I/P, on fresh/recirculation select switch	151- 17- A4	150-121		6
C2998 (Postal)	Behind left of I/P, on fresh/recirculation select switch	151- 25- D1	150-121		6
C2999	Behind center of I/P	151- 17- A1	150-122		10
C3985	Inside traction battery, attached to battery control module	151- 15-A10	150-122		4
C3994	Rear of traction battery pack	151- 15-D10	150-123		4
C3997	Under LH side of vehicle	151- 15- F3	150-123		16
C3998	Under LH side of vehicle	151- 15- F3	150-124		16
C3999	Under LH side of vehicle	151- 15- E1	150-124		16
C4992	LH side of rear transaxle, on oil pump	151- 15- F5	150-125		6
C4993	Top of rear transaxle, on motor/transaxle	151- 15- F8	150-125		10
C4994	Near LH rear wheel, to left rear anti-lock brake sensor	151- 16- F7	150-126		2
C4995	Near RH rear wheel, to right rear anti-lock brake sensor	151- 16- C10	150-126		2
C4996	Top of transaxle motor, on digital transmission range (DTR) sensor	151- 16- F5	150-127	BK	12
C4997	Under rear of vehicle, on oil pressure switch	151- 15- F7	150-127	BL	2
C4998	Under rear of vehicle, on traction inverter module (TIM)	151- 15- F9	150-128		40
C4999	Under rear of vehicle, on traction inverter module (TIM)	151- 15- F9	150-129		24
C5000	Front of vehicle in grill, on charger inlet	151-14- F4	150-130		7

★ Not Available

www.AUTOMOTIVEMECHANIC.org

Ground	Location	Page Zone
G103 (Postal)	LH rear of engine compartment, near anti-lock brake system (ABS) control module	151-27- F5
G104 (Postal)	RH side of underhood compartment, near auxilliary battery tray	151-21- F5
G105 (Postal)	LH side of underhood compartment, on radiator support	151-22- A7
G200 (Postal)	Near RH cowl, near I/P fuse box	151-24- C10
G1997	LH front of underhood compartment, below auxiliary battery	151-13- F10
G1998	RH side of safety wall	151-13- A5
G1998 (Postal)	RH side of underhood compartment, on radiator support	151-22- A3
G1999	On charger assembly	151-13- A5
G4999	Under LH side of vehicle, on frame	151-16- F2
Power Steering Assembly Ground Strap	RH front frame to power steering assembly	★
DC/DC Converter Ground Strap	LH front frame to DC/DC converter	★
Traction Inverter Module Ground Strap	RH rear frame to traction inverter module	★

★ Not Available

www.AUTOMOTIVE MECHANIC.ORG

152-19 LOCATION INDEX

Splice	Location
S117	Dash panel to headlamp junction harness, near T/O to C183
S122	Dash panel to headlamp junction harness, near T/O to C183
S123	Dash panel to headlamp junction harness, near T/O to C147
S130	Dash panel to headlamp junction harness, near T/O to C183
S131	Dash panel to headlamp junction harness, near T/O to C183
S133	Dash panel to headlamp junction harness, near T/O to C136
S147 (Postal)	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribution box
S148 (Postal)	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribution box
S149 (Postal)	Main harness, near T/O to C216
S150 (Postal)	Main harness, in T/O to auxiliary relay box #2
S154	Dash panel to headlamp junction harness, near T/O to C180
S155	Dash panel to headlamp junction harness, near T/O to C156
S155 (Postal)	Dash panel to headlamp junction harness, near T/O to C183
S156	Dash panel to headlamp junction harness, near T/O to C1953
S170 (Postal)	Main harness, in T/O to I/P fuse panel
S171 (Postal)	Main harness, in T/O to I/P fuse panel
S172 (Postal)	Main harness, near T/O to C2995
S173 (Postal)	Main harness, in T/O to I/P fuse panel
S174 (Postal)	Dash panel to headlamp junction harness, near T/O to C124
S175 (Postal)	Dash panel to headlamp junction harness, near T/O to C124
S176 (Postal)	Dash panel to headlamp junction harness, near T/O to C124
S177 (Postal)	Dash panel to headlamp junction harness, near T/O to C1945
S178 (Postal)	Dash panel to headlamp junction harness, near T/O to C1945
S179 (Postal)	Dash panel to headlamp junction harness, near T/O to C1945
S180 (Postal)	Dash panel to headlamp junction harness, near T/O to C182
S181 (Postal)	Dash panel to headlamp junction harness, near T/O to C147
S182 (Postal)	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribution box
S205	Main harness, near T/O to C134
S208	Main harness, near T/O to C216
S209	Main harness, near T/O to C209
S214	Main harness, near T/O to C226
S221	Main harness, near T/O to C216
S227	Main harness, near T/O to C216
S228	Main harness, near T/O to C216
S229	Main harness, near T/O to C134
S230	Main harness, near T/O to C213
S232	Main harness, in T/O to C213

www.AUTOMOTIVE MECHANIC.ORG

Splice	Location
S244	Main harness, near T/O to C216
S251	Main harness, near T/O to C216
S291 (Postal)	Main harness, near T/O to C216
S293 (Postal)	Headlamp dimmer switch jumper, in T/O to C253
S294 (Postal)	Headlamp dimmer switch jumper, in T/O to C253
S295 (Postal)	Main harness, near T/O to C2995
S296 (Postal)	Main harness, in T/O to C903
S297 (Postal)	Main harness, near T/O to C211
S300	Courtesy lamp switch extension harness, near T/O to C3997
S400	Rear lamp connector harness, near T/O to C403
S401	Rear lamp connector harness, near T/O to C403
S402	Rear lamp connector harness, near T/O to C403
S403	Rear lamp connector harness, near T/O to C403
S923 (Postal)	Main harness, in T/O to C904
S924 (Postal)	Main harness, in T/O to C904
S1004	Rear lamp harness, near T/O to C403
S1800	Traction battery cooling fan harness, in T/O to C1987
S1954 (W/ Battery Heaters)	Battery heater harness, in T/O to C1864
S1955	Battery harness, near T/O to C1882
S1956	Battery harness, near T/O to C1885
S1957	Dash panel to headlamp junction harness, near T/O to C136
S1958	Dash panel to headlamp junction harness, near T/O to C136
S1959	Dash panel to headlamp junction harness, near T/O to C136
S1960	Dash panel to headlamp junction harness, near T/O to C1969
S1961	Dash panel to headlamp junction harness, near T/O to C136
S1962	Dash panel to headlamp junction harness, near T/O to C1954
S1963	Dash panel to headlamp junction harness, near T/O to C124
S1964	Dash panel to headlamp junction harness, near T/O to C1948
S1965	Dash panel to headlamp junction harness, near T/O to C131
S1966	Dash panel to headlamp junction harness, on T/O to C1939
S1967	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribribution box
S1968	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribution box
S1969	Dash panel to headlamp junction harness, in T/O to C1945
S1970	Dash panel to headlamp junction harness, in T/O to electric vehicle power distribution box
S1971	Dash panel to headlamp junction harness, near T/O to C1951
S1977	Dash panel to headlamp junction harness, in T/O to C1954

www.AUTOMOTIVE MECHANIC.ORG

152-21 LOCATION INDEX

Splice	Location
S1994	Traction battery cooling fan harness, in T/O to C1982
S1995	Traction battery cooling fan harness, near T/O to C1984
S1996	Traction battery cooling fan harness, near T/O to C1986
S1997	Traction battery cooling fan harness, near T/O to C1986
S1998	Engine control sensor harness, in T/O to C1992
S1999	Engine control sensor harness, near T/O to C124
S2050	Main harness, near T/O to C216
S2900	Main harness, near T/O to C216
S2987	Main harness, near T/O to C216
S2988	Courtesy lamp switch extension harness, in T/O to C201
S2989	Main harness, on T/O to C202
S2990	Main harness, near T/O to C216
S2991	Main harness, near T/O to C216
S2992	Main harness, near T/O to C201
S2993	Main harness, near T/O to C134
S2995	Main harness, on T/O to C210
S2996	Main harness, near T/O to C216
S2997	Main harness, in T/O to C216
S2998	Main harness, near T/O to C232
S4992	Rear lamp harness, near T/O to C3998
S4993	Rear lamp harness, near T/O to C403
S4994	Rear lamp harness, near T/O to C403
S4995	Rear lamp harness, near T/O to C403
S4996	Rear lamp harness, near T/O to C403
S4997	Rear lamp harness, on T/O to C4998

www.AUTOMOTIVEMECHANIC.org

www.AUTOMOTIVEMECHANIC.org

153-4 HARNESS CAUSAL PART NUMBER

Connector Number	Wire Assembly
C124F	12B637
C124M	14290
C131 (Postal)	14290
C134F	14401
C134M	14290
C135F	14401
C135M	14290
C136F	14401
C136M	14290
C137 (Postal)	14290
C144 (Postal)	14290
C147 (Postal)	14290
C148 (Postal)	14290
C150	14290
C151 (Postal)	14290
C154	14290
C155 (Postal)	14290
C156 (Postal)	14290
C158 (Postal)	14290
C161 (Postal)	14290
C164 (Postal)	14290
C180 (Postal)	14290
C181 (Postal)	14290
C182 (Postal)	14290
C183 (Postal)	14290
C200F	13A724
C200M	19A044
C201F	14401
C201M	13A724
C202 (Postal)	14334/19A044
C204 (Postal)	14401
C205 (Postal)	14401
C208F	14401
C208M	14A320
C209	14401
C210 (Postal)	14401
C211 (Postal)	14A320
C212 (Postal)	14401
C213	14401
C214	14401
C215	14401
C216	14401
C218 (Postal)	14401
C219 (Postal)	14401
C221	14401
C224	14401
C226 (Postal)	14401
C227 (Postal)	14401
C228	14401
C231 (Postal)	14401
C232 (Postal)	14401
C233 (Postal)	14401
C234 (Postal)	14401
C235 (Postal)	14401
C240	14401
C242 (Postal)	14401
C249 (Postal)	14401
C250 (Postal)	14401
C252F	19A041
C252M	14401
C253 (Postal)	14A320
C254 (Postal)	14A320
C256	14401
C257 (Postal)	14401
C260 (Postal)	19A044/14631
C261 (Postal)	14401
C262 (Postal)	14401
C270 (Postal)	14401
C271 (Postal)	14401
C303 (Postal)	13A724
C309F (Postal)	14401
C309M (Postal)	14405
C400 (Postal)	13A409
C401 (Postal)	13A409
C403F (Postal)	13A409
C403M (Postal)	14405
C404 (Postal)	13A409
C405 (Postal)	13A409
C407 (Postal)	13A724/14334
C408 (Postal)	13A724/14334
C409	14405
C409 (Postal)	14401
C411 (Postal)	14405
C412 (Postal)	14405
C501 (Postal)	19A044/14631
C506 (Postal)	19A044/14631
C601 (Postal)	19A044
C606 (Postal)	14630/19A041
C900 (Postal)	13A724/14334
C902 (Postal)	13A724/14334
C1747F	14A280
C1747M	10B694
C1748F	14A280
C1748M	10B694
C1749F	14A280
C1749M	10B694
C1750F	14A280
C1750M	10B694
C1751F	14A280
C1751M	10B694
C1752F	14A280
C1752M	10B694
C1753F	14A280
C1753M	10B694
C1754F	14A280
C1754M	10B694
C1755F	14A280
C1755M	10B694
C1756F	14A280
C1756M	10B694
C1757F	14A280
C1757M	10B694
C1758F	14A280
C1758M	10B694
C1759F	14A280
C1759M	10B694
C1801	10B691
C1802	10B691
C1803	10B691
C1804	10B691
C1805	10B691
C1810	10B691
C1813	10B691
C1814	10B691
C1815	10B691
C1816	10B691
C1859	10B700
C1861	10B700

www.AUTOMOTIVEMECHANIC.org

HARNESS CAUSAL PART NUMBER 153-5

Connector Number	Wire Assembly
C1862	10B700
C1863	10B700
C1864	10B700
C1865	10B694
C1866	10B694
C1867F	14A280
C1867M	10B694
C1868F	14A280
C1868M	10B694
C1869F	14A280
C1869M	10B694
C1870F	14A280
C1870M	10B694
C1871F	14A280
C1871M	10B694
C1872F	14A280
C1872M	10B694
C1873F	14A280
C1873M	10B694
C1874F	14A280
C1874M	10B694
C1875F	14A280
C1875M	10B694
C1876F	14A280
C1876M	10B694
C1877F	14A280
C1877M	10B694
C1878F	14A280
C1878M	10B694
C1879F	14A280
C1879M	10B694
C1880F	14A280
C1880M	10B694
C1881F	14A280
C1881M	10B694
C1882F	14A280
C1882M	10B694
C1884F	14A280
C1884M	10B694
C1885F	14A280
C1885M	10B694
C1886F	14A280
C1886M	10B694
C1887F	14A280
C1887M	10B694
C1895	14B325
C1902F	19E822
C1902M	14B306
C1912	14B324
C1914	14B323
C1917	14B312
C1920	14B311
C1923	14B307
C1931	14B305
C1932F	14B305
C1932M	14B325
C1933F	14B305
C1933M	WA-0496
C1935F	14B326
C1935M	14B305
C1938	10B705
C1939F	10B691
C1939M	14290
C1940	14290
C1941	14290
C1943	14290
C1944	14290
C1945	14290
C1946	14290
C1947	14290
C1948F	14290
C1948M	14B305
C1952	14290
C1953	14290
C1954	14290
C1955	14290
C1966	14290
C1967	14290
C1969	14290
C1971	14290
C1972	14290
C1973	14290
C1980F	10B691
C1980M	14B309
C1981	10B691
C1981 (Postal)	14B309
C1982	10B691
C1982 (Postal)	14B309
C1983	10B691
C1983 (Postal)	14B309
C1984	10B691
C1984 (Postal)	14B309
C1985	10B691
C1985 (Postal)	14B309
C1986	10B691
C1986 (Postal)	14B309
C1987	10B691
C1987 (Postal)	14B309
C1988	10B691
C1988 (Postal)	14B309
C1989	10B691
C1989 (Postal)	14B309
C1991	12B637
C1992	12B637
C1993	12B637
C1994	12B637
C1995	12B637
C1996	12B637
C1997	12B637
C1998	12B637
C1999	12B637
C2038	10B691
C2990	14401
C2993	WA-0397
C2994	WA-0397
C2995	14401
C2997	14401
C2998	14401
C2999F	WA-0397
C2999M	14401
C3985F	14B326
C3985M	14B326
C3994F	14B322
C3994M	14B309
C3997F	14405
C3997M	13A724
C3998F	14405
C3998M	13A724

www.AUTOMOTIVEMECHANIC.org

153-6 HARNESS CAUSAL PART NUMBER

Connector Number	Wire Assembly	Connector Number	Wire Assembly	Connector Number	Wire Assembly	Connector Number	Wire Assembly
C3999F	14405						
C3999M	13A724						
C4992	14405						
C4992 (Postal)	13A724						
C4993	14405						
C4994	14405						
C4995	14405						
C4996	14405						
C4997	14405						
C4998	14405						
C4999	14405						
C5000	14B308						

www.AUTOMOTIVEMECHANIC.ORG